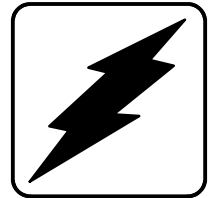


Wiring Diagrams

Fast-Response™ II Industrial Generator Sets



Models:

20-180ROZP
80/100/200REOZP

Controllers:

Decision-Maker™ 340
Decision-Maker™ 3+
Decision-Maker™ 3
Decision-Maker™ 1

Manual

Engine Gauge Box for Paralleling Switchgear

ISO 9001
KOHLER
GENERATORS
INTERNATIONALLY REGISTERED

KOHLER[®]
POWER SYSTEMS

TP-5717 9/99b

This manual provides wiring diagrams for the 20-180ROZP and 80/100/200REOZP Perkins- and Detroit Diesel Series 40-powered generator sets equipped with one of the following controllers:

- Digital Controller, Decision-Maker™ 340
- Microprocessor Controller, Decision-Maker™ 3+
16-Light
7-Light
- Microprocessor Controller, Decision-Maker™ 3
16-Light
6-Light
- Decision-Maker™ 1 Controller
Standard
Standard with Engine Gauges
Expanded with Engine Gauges and AC Meters
- Manual Controller
- Engine Gauge Box for Paralleling Switchgear

At the time of print this manual applied to the model numbers and specification (spec) numbers shown in the Wiring Diagram Cross-Reference chart. On occasion this manual may apply to specs not listed in the Wiring Diagram Cross-Reference chart.

Information in this publication represents data available at the time of print. Kohler Co. reserves the right to change this publication and the products represented without notice and without any obligation or liability whatsoever.

x.in:001:002:a

Service Assistance

Service Information

Please contact a local authorized distributor/dealer for sales, service, or other information about Kohler Generator Division products.

To locate a local authorized distributor/dealer inside the U.S.A. and Canada

- Look on the product or in the information included with the product
- Consult the Yellow Pages under the heading Generators—Electric
- Visit the Kohler Generator Division web site at www.kohlergenerators.com
- Call 1-800-544-2444

To locate a local authorized distributor/dealer outside the U.S.A. and Canada

- Look on the product or in the information included with the product
- Consult the telephone directory under the heading Generators—Electric
- Visit the Kohler Generator Division web site at www.kohlergenerators.com
- Contact the nearest regional office

Africa, Europe, Middle East

London Regional Office
Langley, Slough, England
Phone: (44) 1753-580-771
Fax: (44) 1753-580-036

Australia

Australia Regional Office
Queensland, Australia
Phone: (617) 3893-0061
Fax: (617) 3893-0072

China

China Regional Office
Shanghai, People's Republic of China
Phone: (86) 21-6482 1252
Fax: (86) 21-6482 1255

India, Bangladesh, Sri Lanka

India Regional Office
Bangalore, India
Phone: (91) 80-2284270
(91) 80-2284279
Fax: (91) 80-2284286

Japan

Japan Regional Office
Tokyo, Japan
Phone: (813) 3440-4515
Fax: (813) 3440-2727

Latin America

Latin America Regional Office
Lakeland, Florida, U.S.A.
Phone: (941) 619-7568
Fax: (941) 701-7131

South East Asia

Singapore Regional Office
Singapore, Republic of Singapore
Phone: (65) 264-6422
Fax: (65) 264-6455

Wiring Diagrams

Use the Wiring Diagram Cross-Reference chart to determine the wiring diagram version number for a given model number and spec number. Then find that version number and the controller type on the Controller

Wiring Diagram Reference chart to determine the wiring diagram numbers for your unit. Refer to the generator set operation manual for controller type identification if necessary.

xin:003:002

Wiring Diagram Cross-Reference

Generator Set Model No.	Hz	Generator Set Spec No.	Wiring Diagram Version No.
20ROZP	50/60	PA-192007	(1-1, 1-2)*
30ROZP	50/60	PA-192107	(1-1, 1-2)*
40ROZP	50/60	PA-192207	(1-1, 1-2)*
50ROZP	50/60	PA-192307	(1-1, 1-2)*
60ROZP	50/60	PA-192405	(1-1, 1-2)*
80ROZP	50/60	PA-192507	(1-1, 1-2)*
100ROZP	50/60	PA-192607	(1-1, 1-2)*
125ROZP	50/60	PA-192705	(1-1, 1-2)*
150ROZP	50/60	PA-192807	(1-1, 1-2)*
180ROZP	50/60	PA-192907	(1-1, 1-2)*
80REOZP	50/60	PA-192513	1-2
100REOZP	50/60	PA-192613	1-2
200REOZP	50/60	PA-192926	2

* Use version 1-1 for serial numbers below 363369.
Use version 1-2 for serial number 363369 and above.

xin:003:003

Controller Wiring Diagrams Reference

Controller Description (20-180ROZP, 80/100REOZP)	Version 1-1	P.	Version 1-2	P.
Digital Controller, Decision-Maker™ 340				
Point-to-Point Wiring Diagram				
Sheet 1	—		347941A-J	33
Sheet 2	—		347941B-J	34
Schematic Diagram				
Sheet 1	—		ADV-6130A-H	8
Sheet 2	—		ADV-6130B-H	9
Accessory Connections				
Accessories	—		354246A-D	35
Remote Annunciator Kit	—		354246B-D	36
Microprocessor Controller, Decision-Maker™ 3+ and Decision-Maker™ 3				
Point-to-Point Wiring Diagram				
Sheet 1	327097-B	25	327153-L	28
Sheet 2	327098-B	26	—	
Schematic Diagram				
Sheet 1	ADV-5618-E	1	ADV-6002-E	5
Sheet 2	ADV-5619-J	2	—	
Accessory Connections				
Accessories	255828A-N	16	328912A-F	29
Remote Annunciator Kit, Sheet 1	255828B-N	17	328912B-F	30
Remote Annunciator Kit, Sheet 2	255828C-N	18	—	
Decision-Maker™ 1 Controller				
Point-to-Point Wiring Diagram				
Standard	—		347327-F	32
Standard with Engine Gauges	—		347327-F	32
Standard with Engine Gauges and AC Meters (12 Lead)	—		347058-J	31
Schematic Diagram				
Standard	—		ADV-6010-E	7
Standard with Engine Gauges	—		ADV-6010-E	7
Standard with Engine Gauges and AC Meters (12 Lead)	—		ADV-6008-G	6
Manual Controller				
Point-to-Point Wiring Diagram				
Sheet 1	327099-H	27	327099-H	27
Schematic Diagram				
Sheet 1	ADV-5664-F	3	ADV-5664-F	3
Sheet 2	ADV-5665-G	4	—	

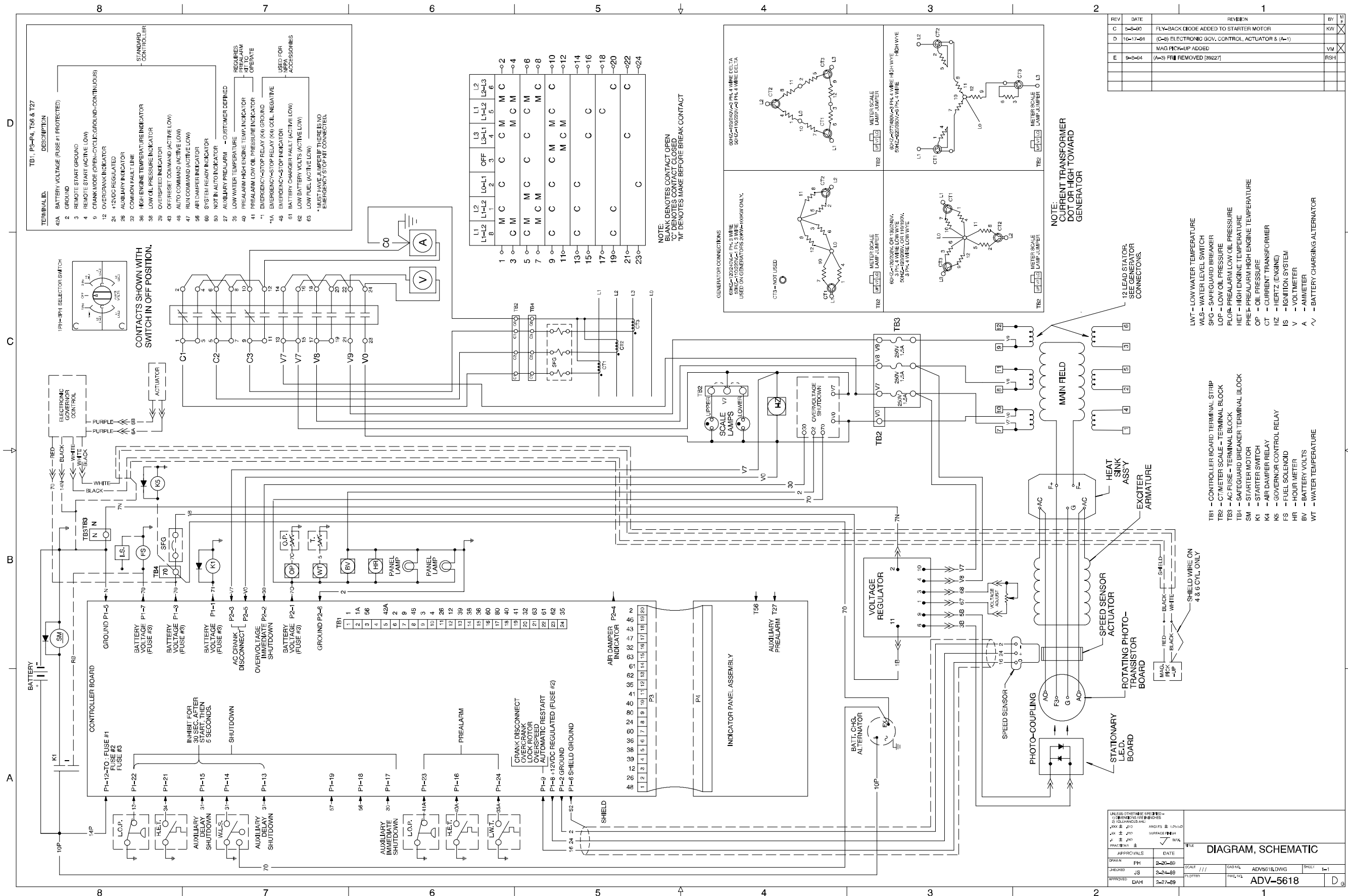
NOTE: Version 1-1 uses the Microprocessor Decision-Maker 3 controller.
Version 1-2 uses the Microprocessor Decision-Maker 3+ controller.

Controller Wiring Diagrams Reference, continued

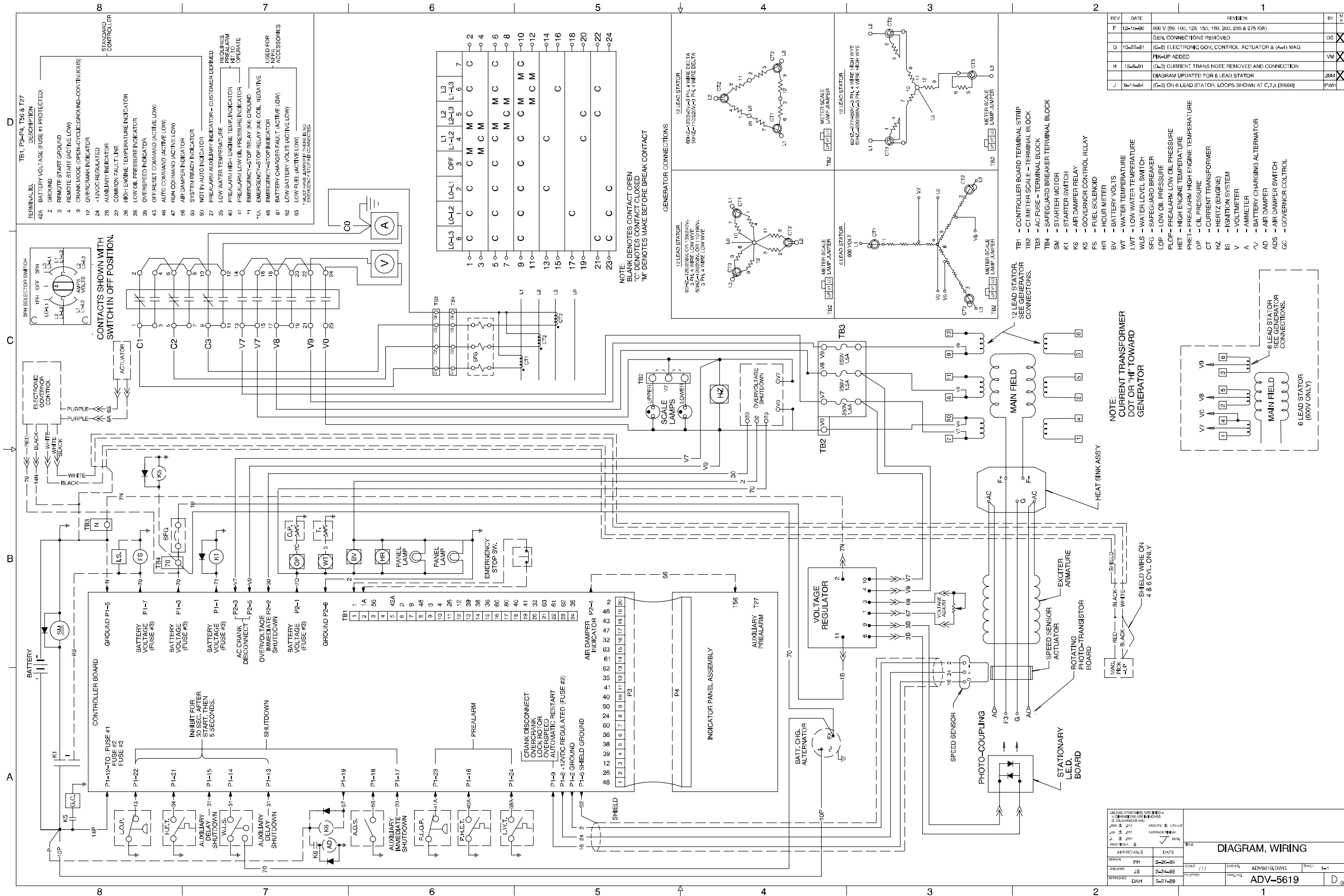
Controller Description (200REOZP)	Version 2	P.
Digital Controller, Decision-Maker™ 340		
Point-to-Point Wiring Diagram		
Sheet 1	324950A-	23
Sheet 2	324950B-	24
Schematic Diagram		
Sheet 1	ADV-6510A-	12
Sheet 2	ADV-6510B-	13
Accessory Connections		
Accessories	354246A-D	35
Remote Annunciator Kit	354246B-D	36
Microprocessor Controller, Decision-Maker™ 3+		
Point-to-Point Wiring Diagram		
Sheet 1	324948A-	19
Sheet 2	324948B-	20
Schematic Diagram		
Sheet 1	ADV-6509A-A	10
Sheet 2	ADV-6509B-A	11
Accessory Connections		
Accessories	328912A-F	29
Remote Annunciator Kit, Sheet 1	328912B-F	30
Remote Annunciator Kit, Sheet 2	—	
Engine Gauge Box for Paralleling Switchgear		
Point-to-Point Wiring Diagram		
Sheet 1	324949A-	21
Sheet 2	324949B-	22
Schematic Diagram		
Sheet 1	ADV-6511A-	14
Sheet 2	ADV-6511B-	15

xin:003:004

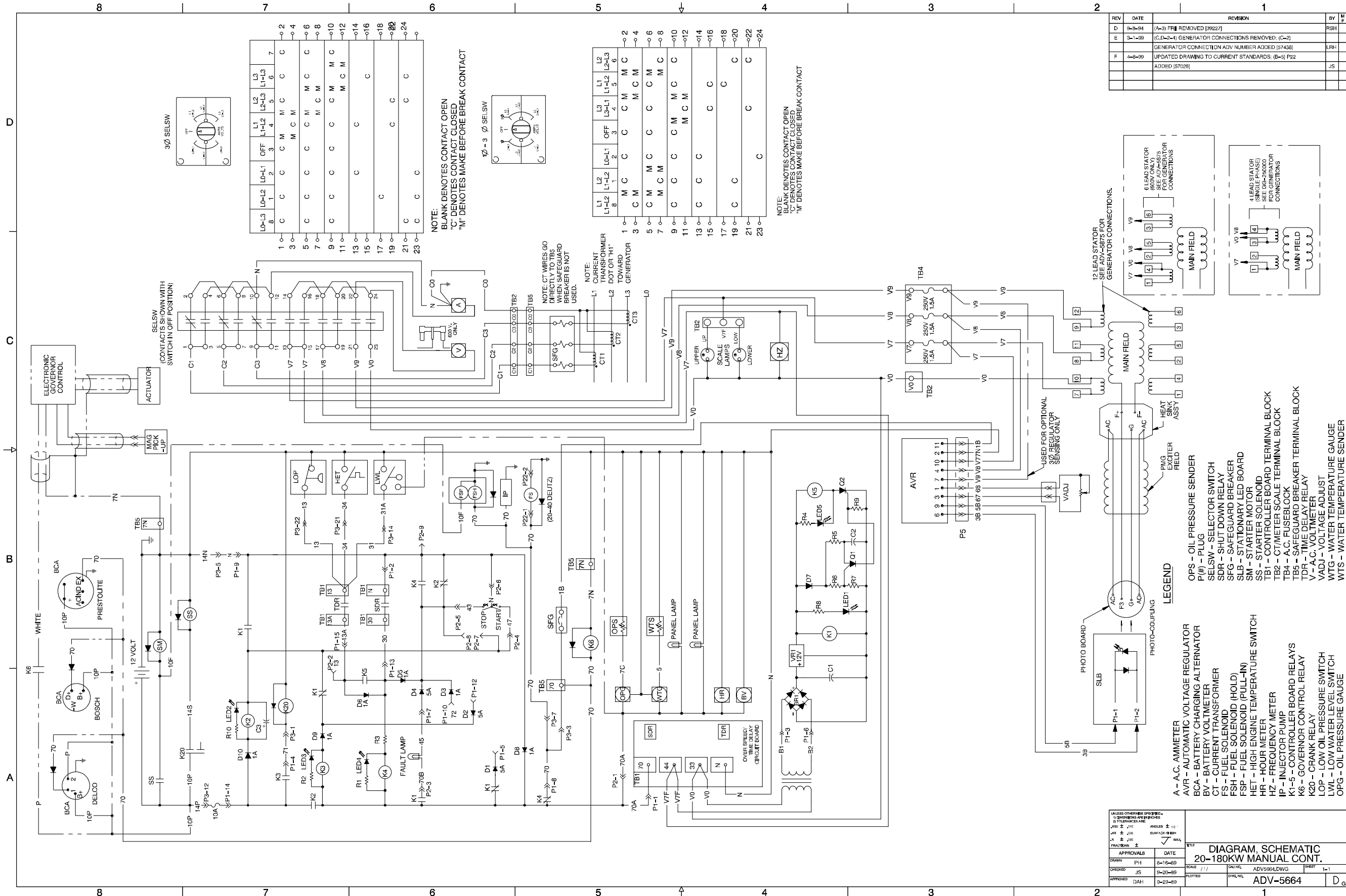
Notes



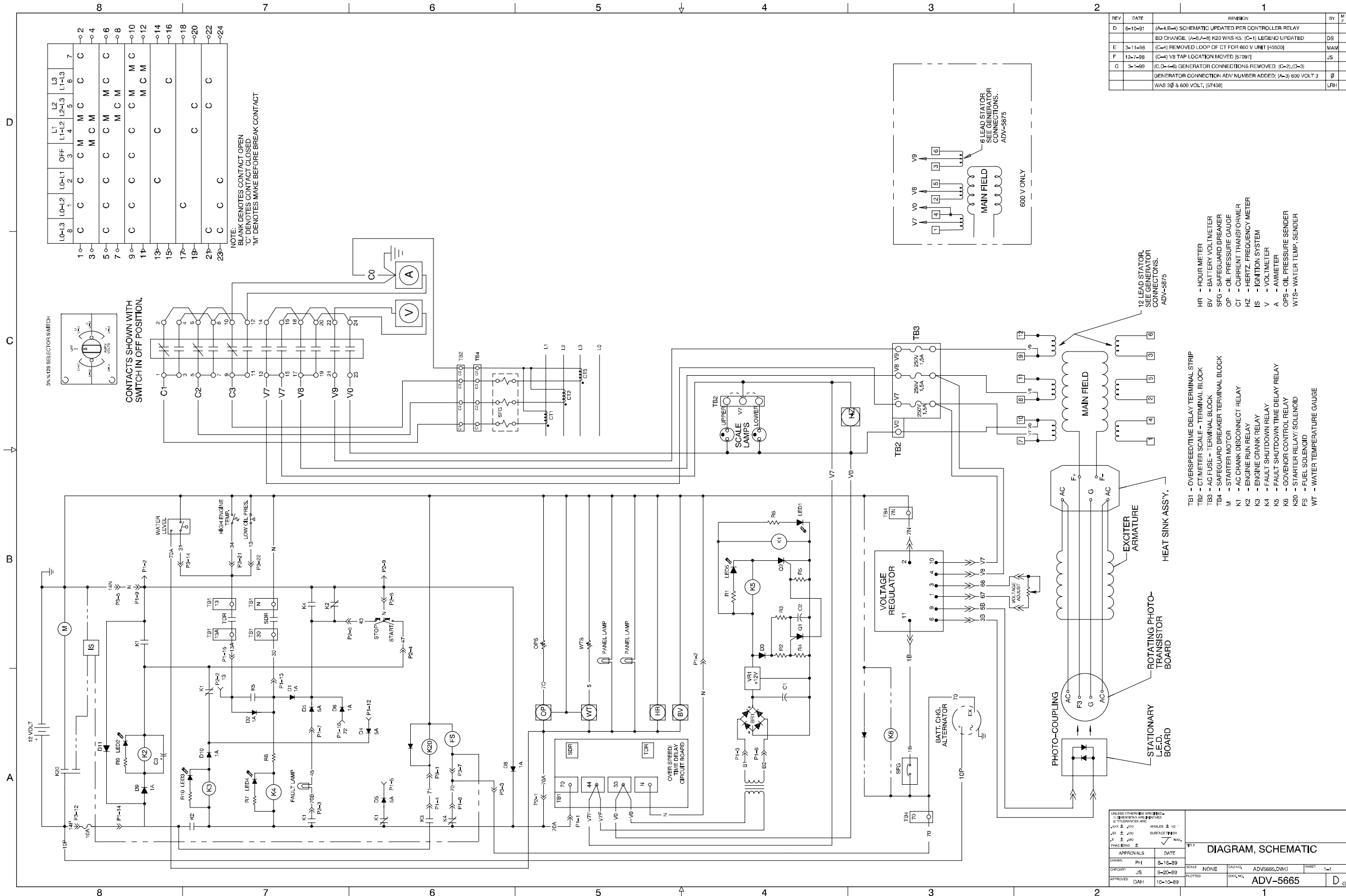
Microprocessor Controller, Schematic Diagram, Sheet 1, ADV-5618-E



Microprocessor Controller, Schematic Diagram, Sheet 2, ADV-5619-J



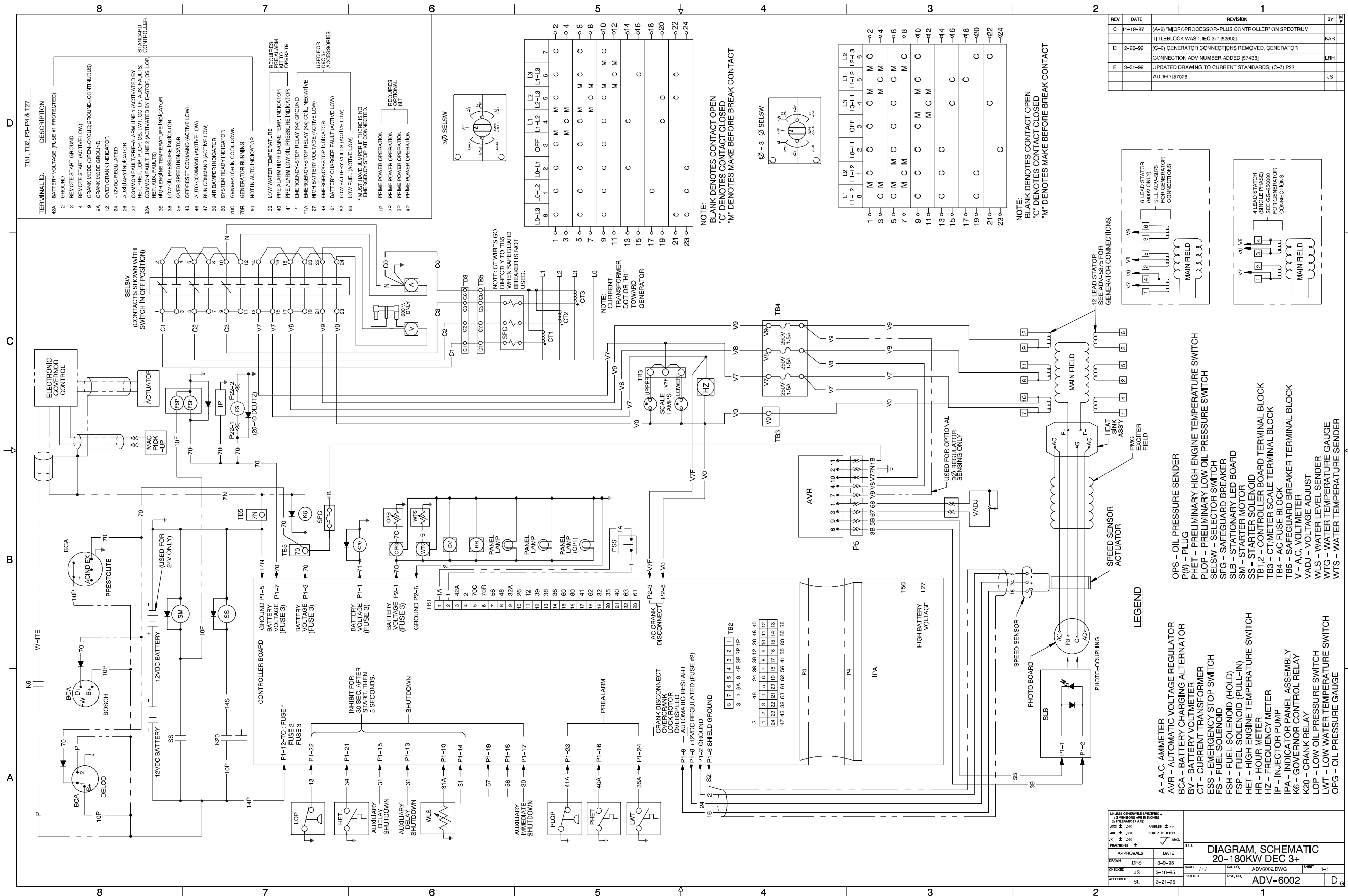
Manual Controller, Schematic Diagram, Sheet 1, ADV-5664-F



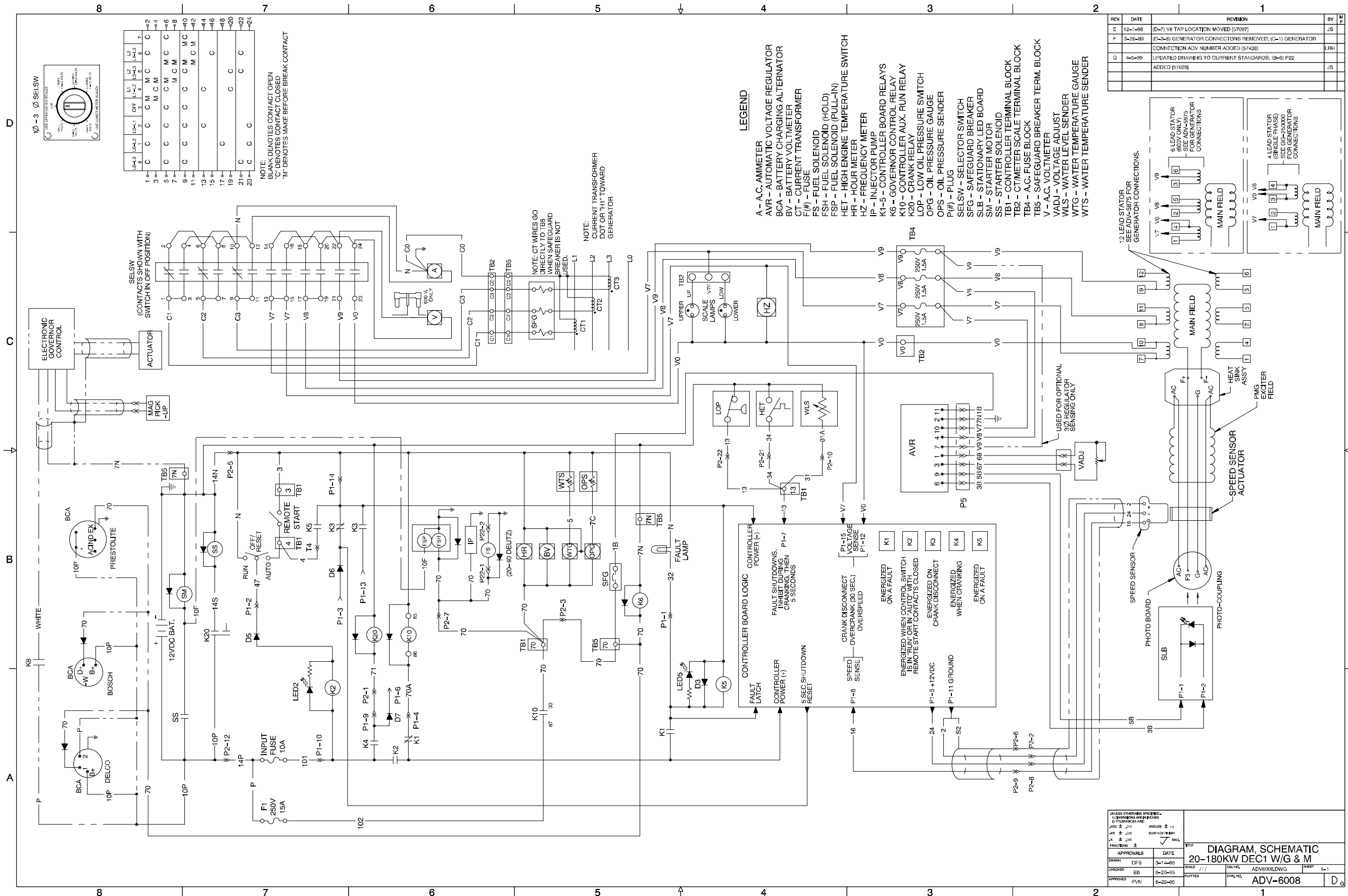
REV	DATE	REVISION	BY	CHK
D	5-10-91	(A=4,B=4) SCHEMATIC UPDATED PER CONTROLLER RELAY	DS	
		BD CHANGE, (A=5,A=8) K20 WAS KS, (C=1) LEGEND UPDATED	DS	
E	3-11-98	(C=1) REMOVED LOOP OF CT FOR 600 V UNIT [45500]	MM	
F	12-7-98	(C=1) V8 TAP LOCATION MOVED [57987]	JS	
G	3-1-99	(C,D=1-6) GENERATOR CONNECTIONS REMOVED; (C=2),(D=3) GENERATOR CONNECTION ADV NUMBER ADDED; (A=3) 600 VOLT 3 WAS 3Ø & 600 VOLT, [57438]		

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES ANGLES ± 10° SURFACE FINISH MAX. HOLE DRILL ± .005		DIAGRAM, SCHEMATIC	
APPROVALS	DATE	SCALE	SHEET
DRAWN PH	3-15-89	NONE	1-1
CHECKED JS	8-20-89		
APPROVED DAH	10-10-89		
DWG. NO. ADV-5665, DWG 3		D	

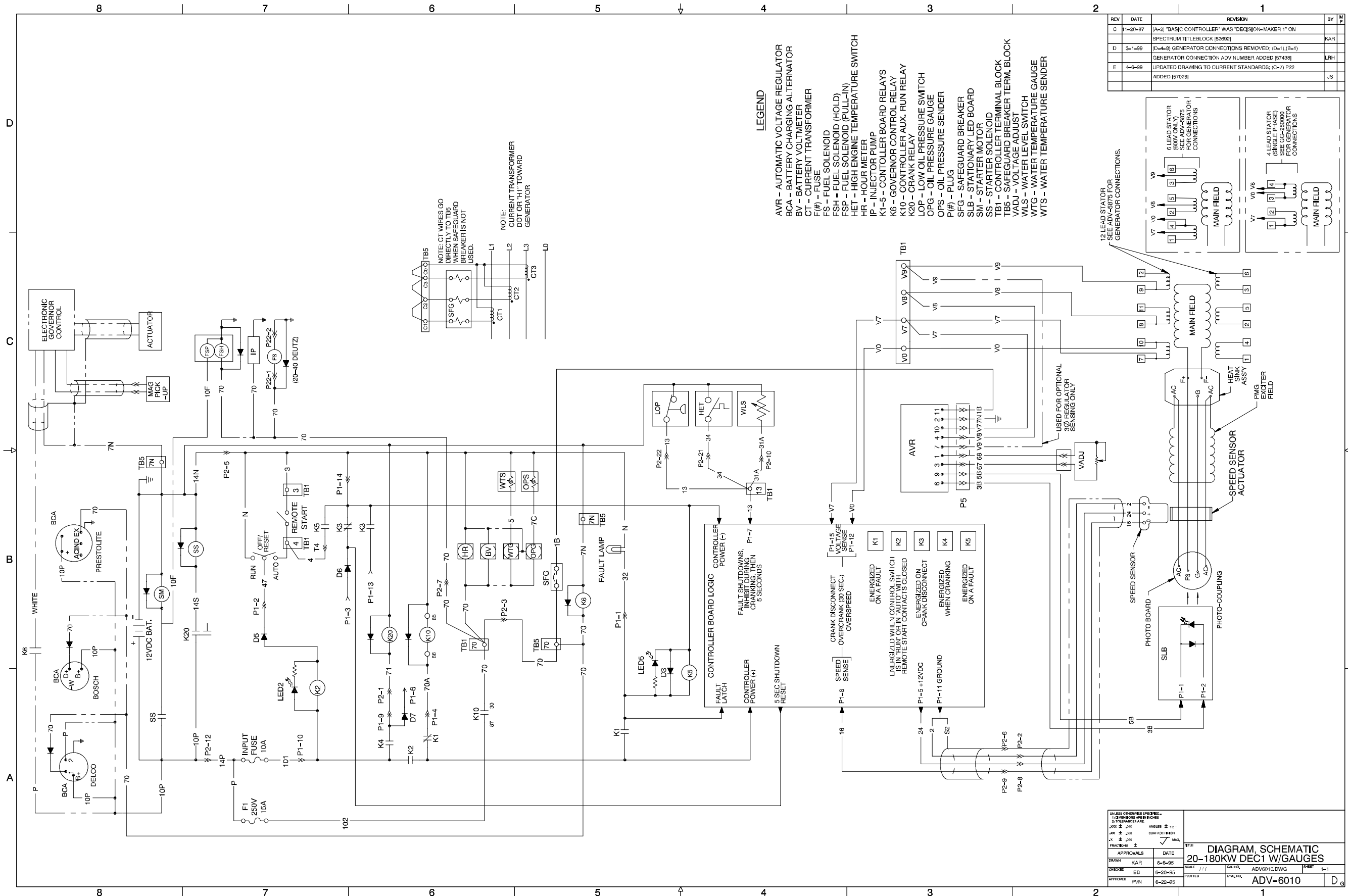
Manual Controller, Schematic Diagram, Sheet 2, ADV-5665-G



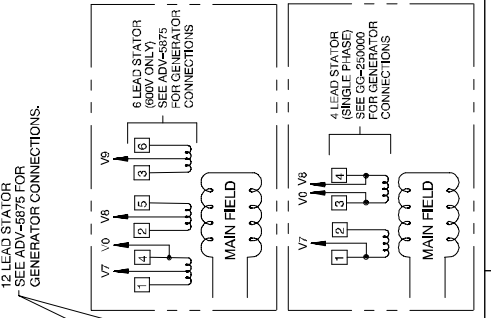
Microprocessor Controller, Schematic Diagram, Sheet 1, ADV-6002-E



Decision-Maker 1, Schematic Diagram, Standard with Engine Gauges and AC Meters, ADV-6008-G

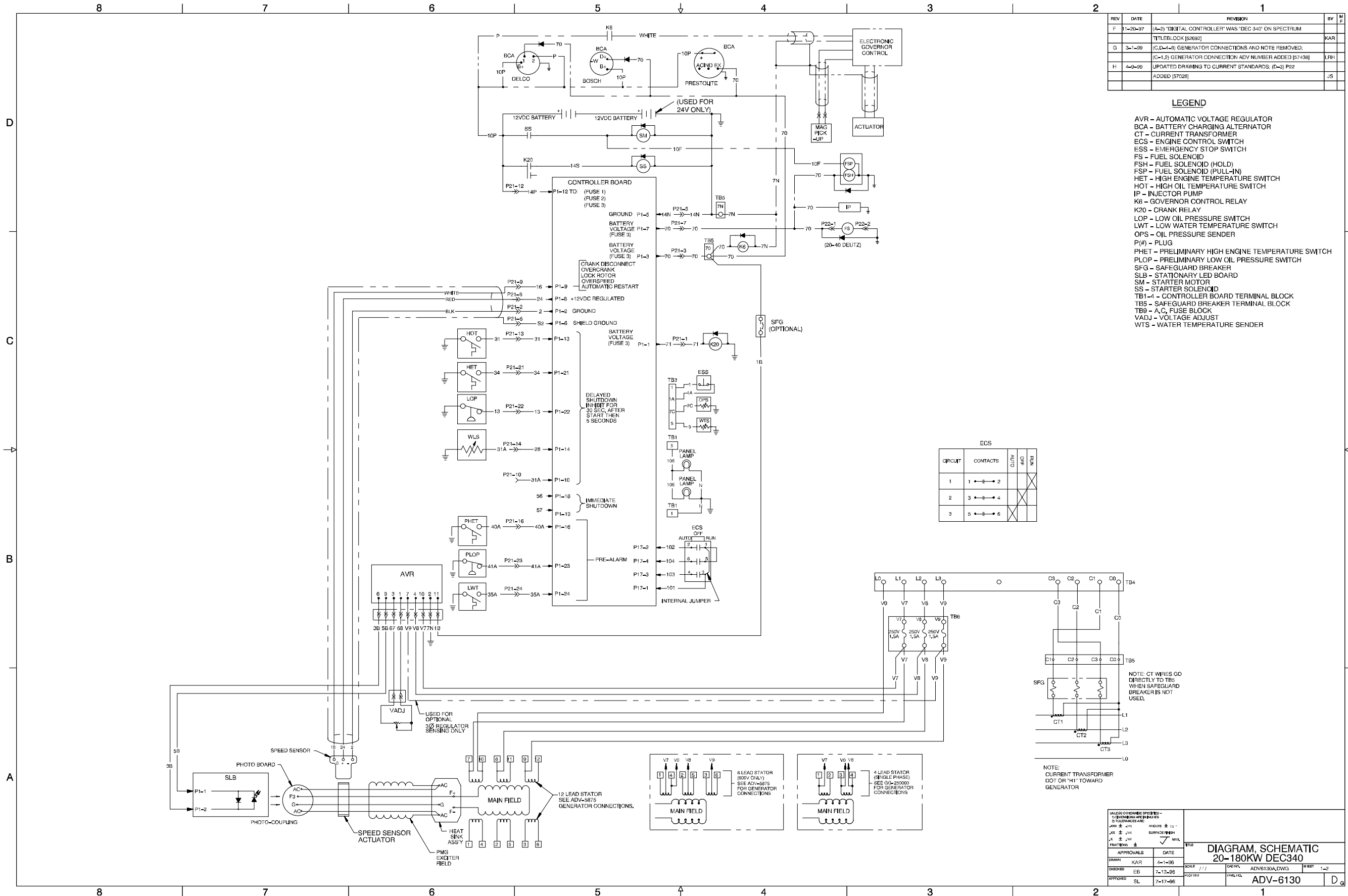


REV	DATE	REVISION	BY	CHK
C	11-20-97	(A=2) "BASIC CONTROLLER" WAS "DECISION-MAKER 1" ON SPECTRUM TITLEBLOCK (52862)	KAR	
D	3-1-99	(D=1) GENERATOR CONNECTIONS REMOVED; (D=1)(B=1) GENERATOR CONNECTION ADV NUMBER ADDED (57438)	LRH	
E	4-6-99	UPDATED DRAWING TO CURRENT STANDARDS; (C=7) P22 ADDED (57028)	JS	



UNLESS OTHERWISE SPECIFIED: - DIMENSIONS ARE IN INCHES - TOLERANCES ARE: FRACTIONS ± .005 DECIMALS ± .005 ANGLES ± .1° HOLE DIA ± .005 HOLE POSITION ± .010		DATE: 09-05-95		DRAWN: KAR	
APPROVALS: PUN		DATE: 09-22-95		DRAWN: KAR	
CHECKED: EB		DATE: 09-20-95		DRAWN: KAR	
APPROVED: PUN		DATE: 09-22-95		DRAWN: KAR	
TITLE: DIAGRAM, SCHEMATIC 20-180KW DEC1 W/GAUGES		SCALE: 1/1		SHEET: 1-1	
DRAWING NO: ADV-6010		PLOTTER: ADV-6010		DWG. NO: ADV-6010	

Decision-Maker 1 Controller, Schematic Diagram, Standard, ADV-6010-E



Digital Controller, Schematic Diagram, Sheet 1, ADV-6130A-H

REV	DATE	REVISION	BY	MR
A	2-17-97	(C=3,4) TB2, TB3 & TB4 UPDATED TO SHOW CURRENT TERMINAL CONFIGURATION [49429]	KAR	
B	11-21-97	(A=2) 'DIGITAL CONTROLLER' WAS 'DEC 340' ON SPECTRUM 'TITLE BLOCK [32829]	KAR	
H	1-12-99	DRAWING UPDATED TO CURRENT STANDARDS. INTERCONNECT BOARD LIST MOVED FROM SHEET 3. (A=1) 2 OF 2 WAS 2 OF 3 [57028]	JS	

INTERCONNECT BOARD

OUTPUT CONNECTIONS

- TB1-1 ENGINE GROUND
- TB1-2 ENGINE GROUND
- TB1-3 ENGINE GROUND
- TB1-4 ENGINE GROUND
- TB1-5 PANEL LAMP OUTPUT
- TB1-6 RDO-10
- TB1-7 RDO-9
- TB1-8 RDO-7
- TB1-9 RDO-5
- TB1-10 N/A RELAY OUTPUT (80)
- TB1-11 OVERCRANK RELAY OUTPUT (12)
- TB1-12 LOW BATTERY VOLTAGE RELAY OUTPUT (62)
- TB1-13 LOW ENGINE TEMPERATURE RELAY OUTPUT (35)
- TB1-14 LOW OIL PRESSURE RELAY OUTPUT (38)
- TB1-15 HIGH ENGINE TEMPERATURE RELAY OUTPUT (36)
- TB1-16 LOW OIL PRESSURE WARNING RELAY OUTPUT (41)
- TB1-17 HIGH ENGINE TEMPERATURE WARNING RELAY OUTPUT (40)
- TB1-18 42A
- TB1-19 42A
- TB1-20 42A
- TB1-21 DVR DOWN VOLTAGE ADJUSTMENT
- TB1-22 DVR COMMON VOLTAGE ADJUSTMENT
- TB1-23 DVR UP VOLTAGE ADJUSTMENT
- TB1-24 RDO-8
- TB1-25 RDO-6
- TB1-26 RDO-4
- TB1-27 RDO-3
- TB1-28 RDO-2
- TB1-29 RDO-1
- TB1-30 SYSTEM READY RELAY OUTPUT (60)
- TB1-31 E-STOP RELAY OUTPUT (48)
- TB1-32 BATTERY CHARGER FAULT RELAY OUTPUT (61)
- TB1-33 LOW FUEL RELAY OUTPUT (63)
- TB1-34 OVERSPEED RELAY OUTPUT (39)

AC INPUT CONNECTIONS

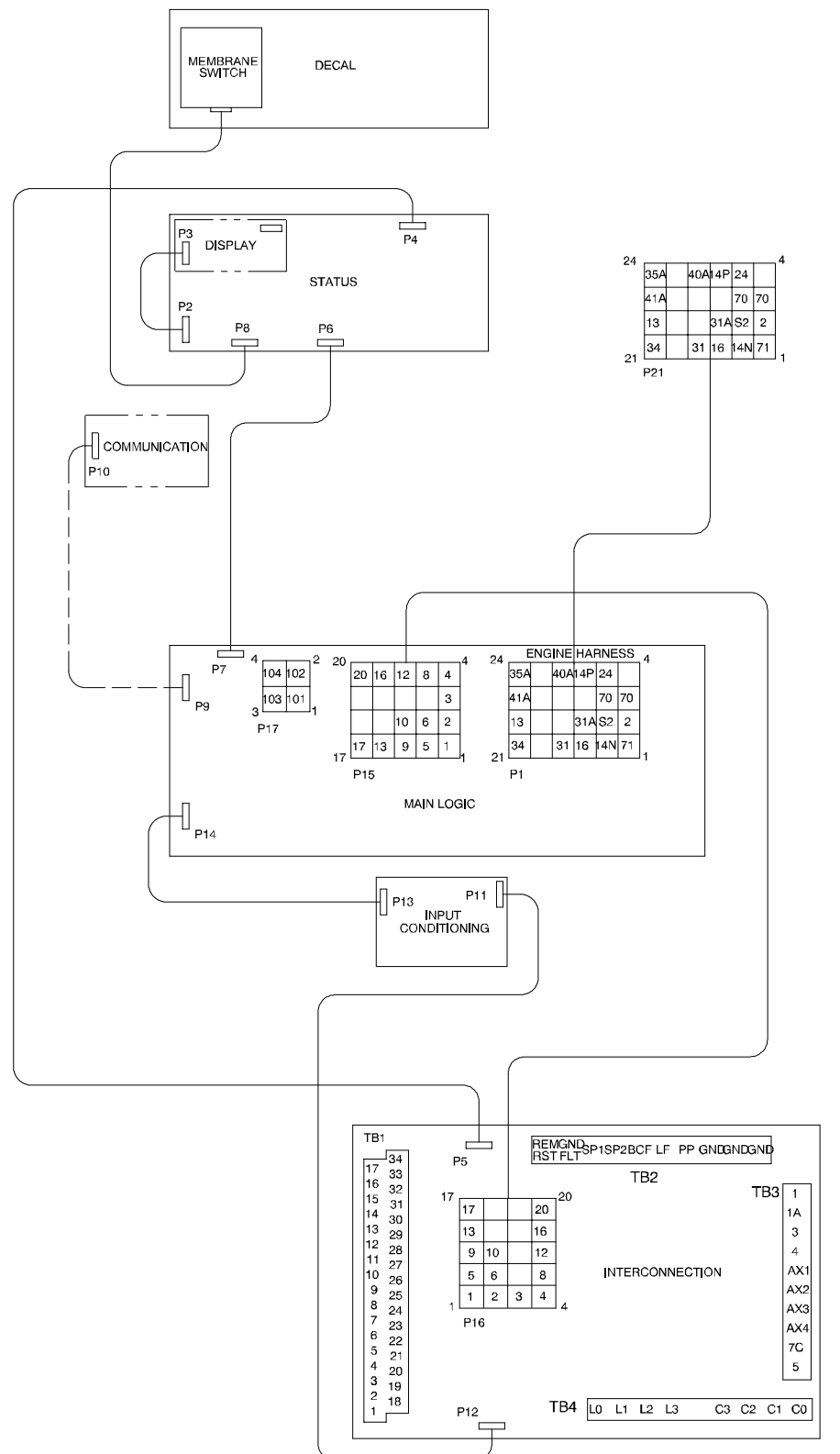
- TB4-1 L0 (V0)
- TB4-2 L1 (V7)
- TB4-3 L2 (V8)
- TB4-4 L3 (V9)
- TB4-5
- TB4-6 C3
- TB4-7 C2
- TB4-8 C1
- TB4-9 C0

INPUT CONNECTIONS

- TB2-1 REMOTE RESET *
- TB2-2 GROUND FAULT *
- TB2-3 NOT USED
- TB2-4 NOT USED
- TB2-5 BATTERY CHARGER FAULT *
- TB2-6 LOW FUEL *
- TB2-7 PRIME POWER MODE *
- TB2-8 ENGINE GROUND
- TB2-9 ENGINE GROUND
- TB2-10 ENGINE GROUND
- TB3-1 E-STOP GROUND (1)
- TB3-2 E-STOP (1A)
- TB3-3 REMOTE START (3)
- TB3-4 REMOTE START (4)
- TB3-5 AUXILIARY 1 *
- TB3-6 AUXILIARY 2 *
- TB3-7 AUXILIARY 3 *
- TB3-8 AUXILIARY 4 *
- TB3-9 OIL PRESSURE SENDING UNIT (7C)
- TB3-10 WATER TEMPERATURE SENDING UNIT (5)

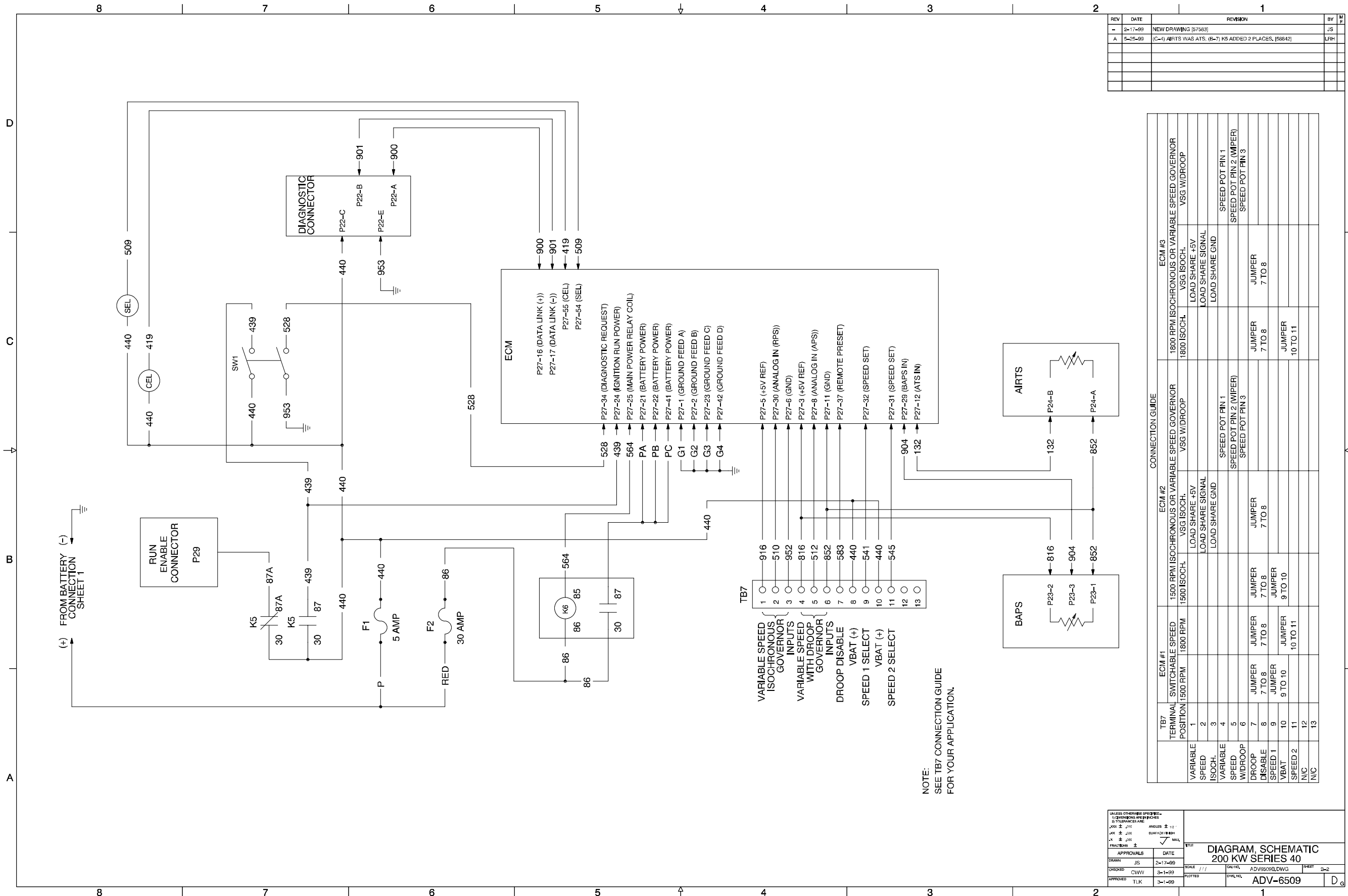
P1 CONNECTIONS (ENGINE TO MICRO BOARD)

- POSITIONS**
- 1 ENGINE CRANK (71)
 - 2 SPEED SENSOR GROUND (2)
 - 3 SAFEGUARD BREAKER (70)
 - 4 B.C. ALTERNATOR FLASHING
 - 5 STARTER MOTOR GROUND (14N)
 - 6 SPEED SENSOR SHIELD (S2)
 - 7 ENGINE RUN (70)
 - 8 V+ SPEED SENSOR (24)
 - 9 SPEED SENSOR SIGNAL (16)
 - 10 LOW COOLANT LEVEL PTC (31A)
 - 11 NOT USED
 - 12 BATTERY + (14P)
 - 13 HIGH OIL TEMPERATURE SWITCH INPUT (31) *
 - 14 LOW COOLANT LEVEL SWITCH INPUT (31) *
 - 15 NOT USED
 - 16 HIGH ENGINE TEMPERATURE WARNING SWITCH INPUT (40A) *
 - 17 NOT USED
 - 18 AIR DAMPER SWITCH INPUT (56) *
 - 19 AIR DAMPER SWITCH OUTPUT (57)
 - 20 NOT USED
 - 21 HIGH ENGINE TEMPERATURE SWITCH INPUT (34) *
 - 22 LOW OIL PRESSURE SWITCH INPUT (13) *
 - 23 LOW OIL PRESSURE WARNING SWITCH INPUT (41A) *
 - 24 LOW ENGINE TEMPERATURE SWITCH INPUT (35A) *
- * GROUND TO ACTIVATE



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE: DIMENSIONS ARE: DIMENSIONS ARE: DIMENSIONS ARE:		SCALE: 1/1		DATE: ADV-6130.DWG		SHEET: 2-2	
APPROVALS:		DATE: 7-12-99		DRAWN: KAR		CHECKED: EB	
DRAWN: KAR		DATE: 7-12-99		APPROVED: SL		PLOTTED: 7-17-99	
TITLE: DIAGRAM, SCHEMATIC				PART: ADV-6130			
SUBTITLE: 20-180KW DEC340				DRAWING NO: ADV-6130			

Digital Controller, Schematic Diagram, Sheet 2, ADV-6130B-H



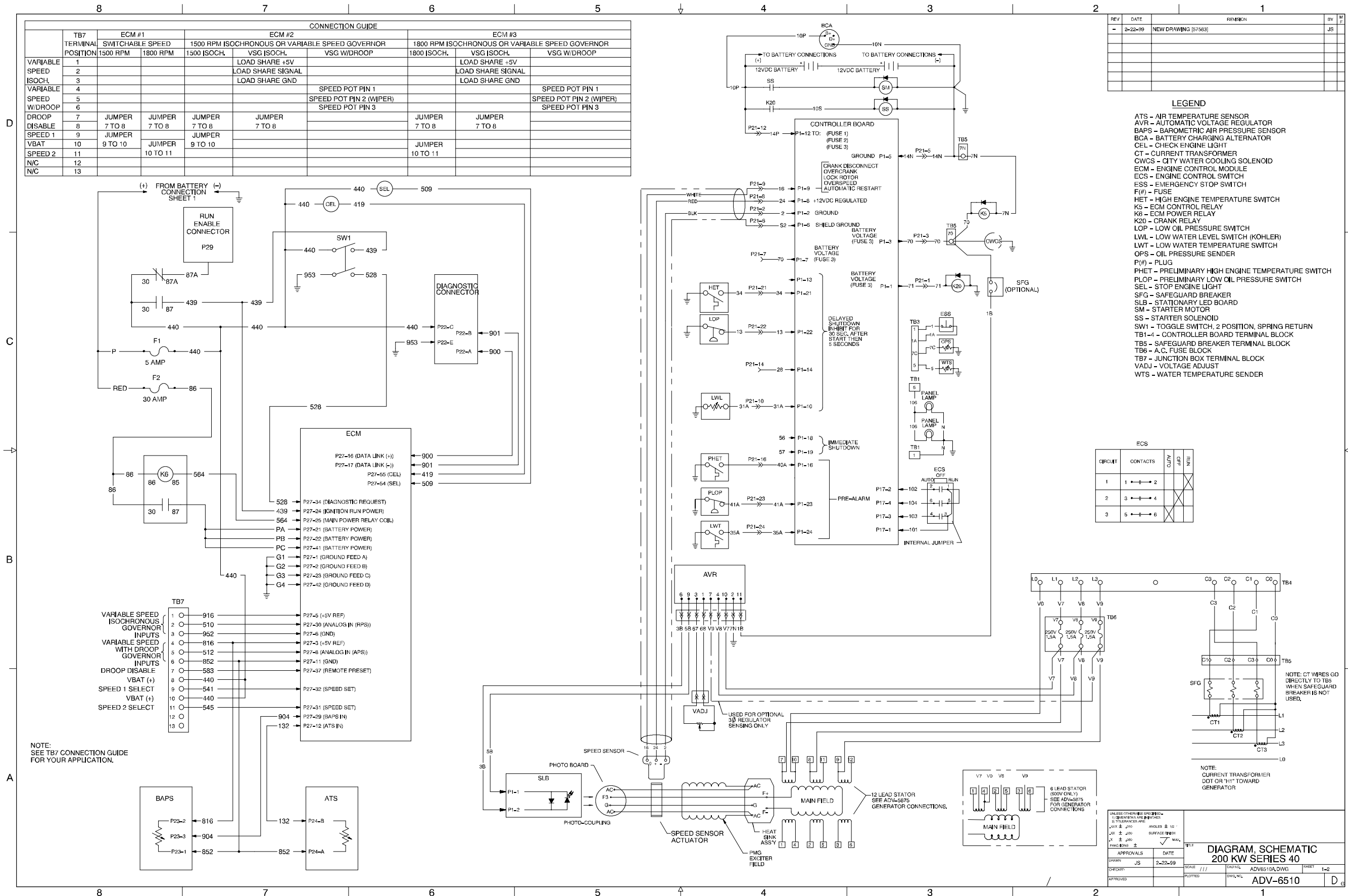
REV	DATE	REVISION	BY	CHK
-	2-17-99	NEW DRAWING [57583]	JS	
A	5-25-99	(C-1) AIRTS WAS ATS, (B-7) K5 ADDED 2 PLACES, [56842]	LRH	

TB7		ECM #1	ECM #2	ECM #3
VARIABLE SPEED	1	1500 RPM ISOCRONOUS OR VARIABLE SPEED GOVERNOR	1500 ISOCH.	1800 RPM ISOCRONOUS OR VARIABLE SPEED GOVERNOR
SPEED	2	1800 RPM	VSG ISOCH.	1800 ISOCH.
ISOCH.	3	LOAD SHARE +5V	LOAD SHARE +5V	LOAD SHARE +5V
VARIABLE SPEED	4	LOAD SHARE SIGNAL	LOAD SHARE SIGNAL	LOAD SHARE SIGNAL
W/DROOP	5	LOAD SHARE GND	LOAD SHARE GND	LOAD SHARE GND
DROOP	6	SPEED POT PIN 1	SPEED POT PIN 1	SPEED POT PIN 1
DISABLE	7	SPEED POT PIN 2 (W/PER)	SPEED POT PIN 2 (W/PER)	SPEED POT PIN 2 (W/PER)
SPEED 1	8	JUMPER 7 TO 8	JUMPER 7 TO 8	JUMPER 7 TO 8
VBAT	9	JUMPER 9 TO 10	JUMPER 9 TO 10	JUMPER 7 TO 8
SPEED 2	10	JUMPER 10 TO 11	JUMPER 10 TO 11	JUMPER 10 TO 11
N/C	11			
	12			
	13			

NOTE:
SEE TB7 CONNECTION GUIDE
FOR YOUR APPLICATION.

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES DIMENSIONS ARE: X ± .005 Y ± .005 Z ± .005 FRACTIONS: 1/16		ANGLES ± .1° SURFACE FINISH MAX		DATE: 2-17-99		DRAWN: JS		CHECKED: CWW		APPROVED: TLK	
DRAWN: JS				DATE: 2-17-99				SCALE: 1/1			
CHECKED: CWW				DATE: 3-1-99				DRAWN: ADV509B.DWG			
APPROVED: TLK				DATE: 3-1-99				PLOTTED: ADV-6509			
										SHEET: 2-2	

Microprocessor Controller, Schematic Diagram, Sheet 2, ADV-6509B-A



Digital Controller, Schematic Diagram, Sheet 1, ADV-6510A-

REV	DATE	REVISION	BY	APP
1	2-22-99	NEW DRAWING (57583)	JS	

INTERCONNECT BOARD

OUTPUT CONNECTIONS

- TB1-1 ENGINE GROUND
- TB1-2 ENGINE GROUND
- TB1-3 ENGINE GROUND
- TB1-4 ENGINE GROUND
- TB1-5 PANEL LAMP OUTPUT
- TB1-6 RDO-10
- TB1-7 RDO-9
- TB1-8 RDO-7
- TB1-9 RDO-5
- TB1-10 N/A RELAY OUTPUT (80)
- TB1-11 OVERCRANK RELAY OUTPUT (12)
- TB1-12 LOW BATTERY VOLTAGE RELAY OUTPUT (62)
- TB1-13 LOW ENGINE TEMPERATURE RELAY OUTPUT (35)
- TB1-14 LOW OIL PRESSURE RELAY OUTPUT (38)
- TB1-15 HIGH ENGINE TEMPERATURE RELAY OUTPUT (36)
- TB1-16 LOW OIL PRESSURE WARNING RELAY OUTPUT (41)
- TB1-17 HIGH ENGINE TEMPERATURE WARNING RELAY OUTPUT (40)
- TB1-18 42A
- TB1-19 42A
- TB1-20 42A
- TB1-21 DVR DOWN VOLTAGE ADJUSTMENT
- TB1-22 DVR COMMON VOLTAGE ADJUSTMENT
- TB1-23 DVR UP VOLTAGE ADJUSTMENT
- TB1-24 RDO-8
- TB1-25 RDO-6
- TB1-26 RDO-4
- TB1-27 RDO-3
- TB1-28 RDO-2
- TB1-29 RDO-1
- TB1-30 SYSTEM READY RELAY OUTPUT (60)
- TB1-31 E-STOP RELAY OUTPUT (48)
- TB1-32 BATTERY CHARGER FAULT RELAY OUTPUT (61)
- TB1-33 LOW FUEL RELAY OUTPUT (63)
- TB1-34 OVERSPEED RELAY OUTPUT (39)

AC INPUT CONNECTIONS

- TB4-1 L0 (V0)
- TB4-2 L1 (V7)
- TB4-3 L2 (V8)
- TB4-4 L3 (V9)
- TB4-5
- TB4-6 C3
- TB4-7 C2
- TB4-8 C1
- TB4-9 C0

INPUT CONNECTIONS

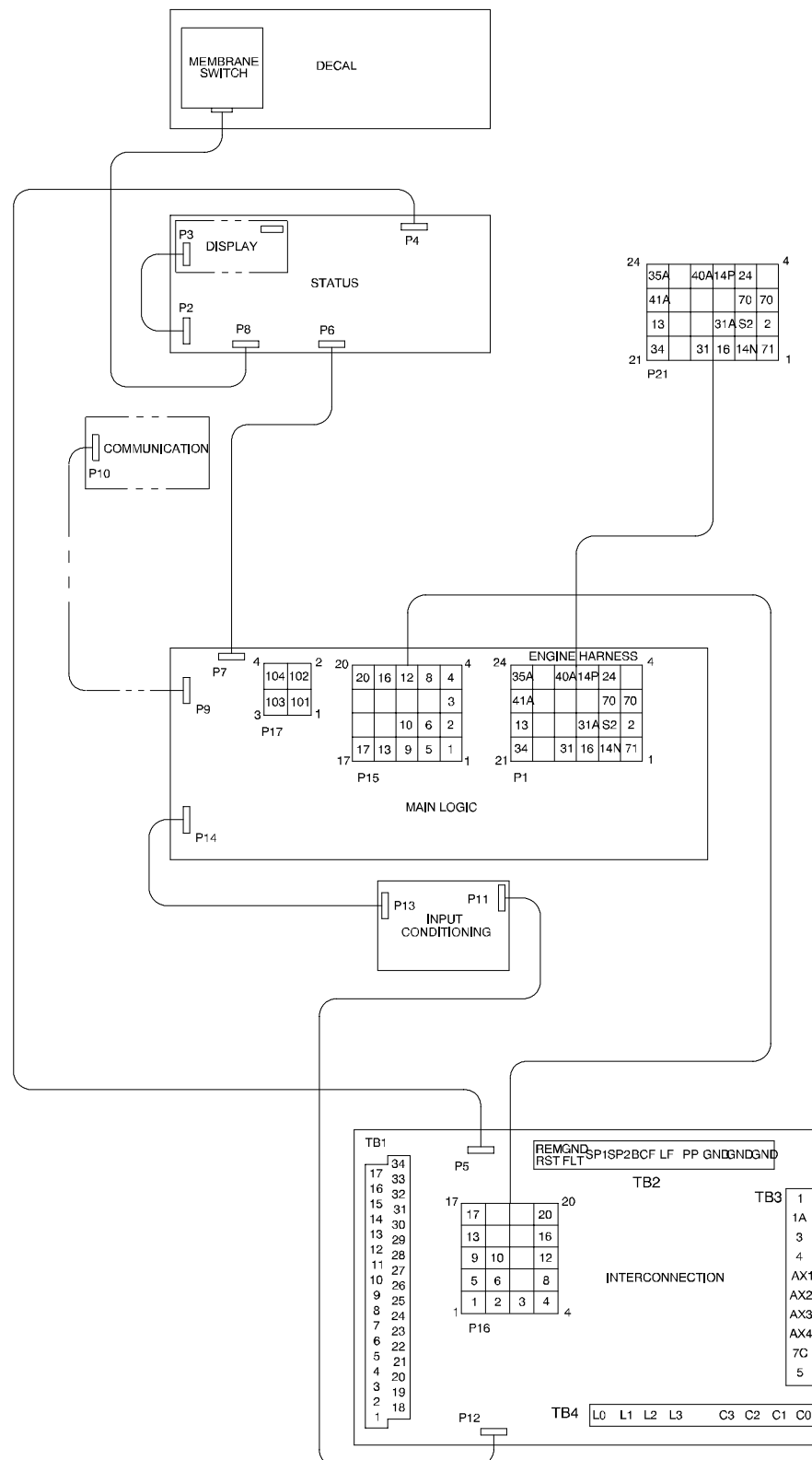
- TB2-1 REMOTE RESET *
- TB2-2 GROUND FAULT *
- TB2-3 NOT USED
- TB2-4 NOT USED
- TB2-5 BATTERY CHARGER FAULT *
- TB2-6 LOW FUEL *
- TB2-7 PRIME POWER MODE *
- TB2-8 ENGINE GROUND
- TB2-9 ENGINE GROUND
- TB2-10 ENGINE GROUND
- TB3-1 E-STOP GROUND (1)
- TB3-2 E-STOP (1A)
- TB3-3 REMOTE START (3)
- TB3-4 REMOTE START (4)
- TB3-5 AUXILIARY 1 *
- TB3-6 AUXILIARY 2 *
- TB3-7 AUXILIARY 3 *
- TB3-8 AUXILIARY 4 *
- TB3-9 OIL PRESSURE SENDING UNIT (7C)
- TB3-10 WATER TEMPERATURE SENDING UNIT (5)

P1 CONNECTIONS (ENGINE TO MICRO BOARD)

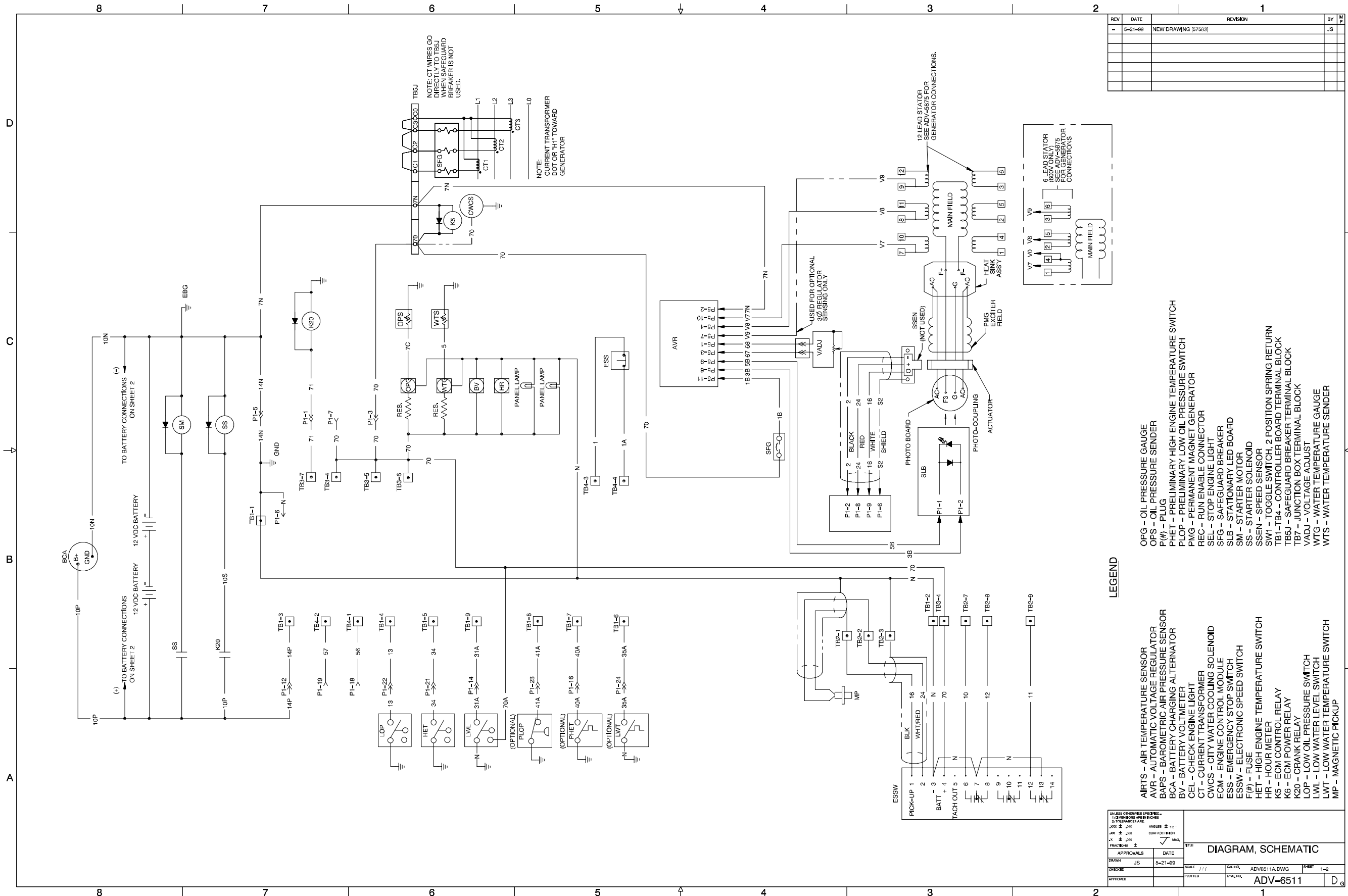
POSITIONS

- 1 ENGINE CRANK (71)
- 2 SPEED SENSOR GROUND (2)
- 3 SAFEGUARD BREAKER (70)
- 4 B.C. ALTERNATOR FLASHING
- 5 STARTER MOTOR GROUND (14N)
- 6 SPEED SENSOR SHIELD (S2)
- 7 ENGINE RUN (70)
- 8 V+ SPEED SENSOR (24)
- 9 SPEED SENSOR SIGNAL (16)
- 10 LOW COOLANT LEVEL PTC (31A)
- 11 NOT USED
- 12 BATTERY + (14P)
- 13 HIGH OIL TEMPERATURE SWITCH INPUT (31) *
- 14 LOW COOLANT LEVEL SWITCH INPUT (31) *
- 15 NOT USED
- 16 HIGH ENGINE TEMPERATURE WARNING SWITCH INPUT (40A) *
- 17 NOT USED
- 18 AIR DAMPER SWITCH INPUT (56) *
- 19 AIR DAMPER SWITCH OUTPUT (57)
- 20 NOT USED
- 21 HIGH ENGINE TEMPERATURE SWITCH INPUT (34) *
- 22 LOW OIL PRESSURE SWITCH INPUT (13) *
- 23 LOW OIL PRESSURE WARNING SWITCH INPUT (41A) *
- 24 LOW ENGINE TEMPERATURE SWITCH INPUT (35A) *

* GROUND TO ACTIVATE



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS DIMENSIONS ARE IN INCHES		SCALE 1/1	
APPROVALS	DATE	DIAGRAM, SCHEMATIC 200 KW SERIES 40	
DRAWN JS	2-22-99	DATE	2-22-99
CHECKED		SCALE	1/1
APPROVED		PLOTTED	
ADV-6510		D	



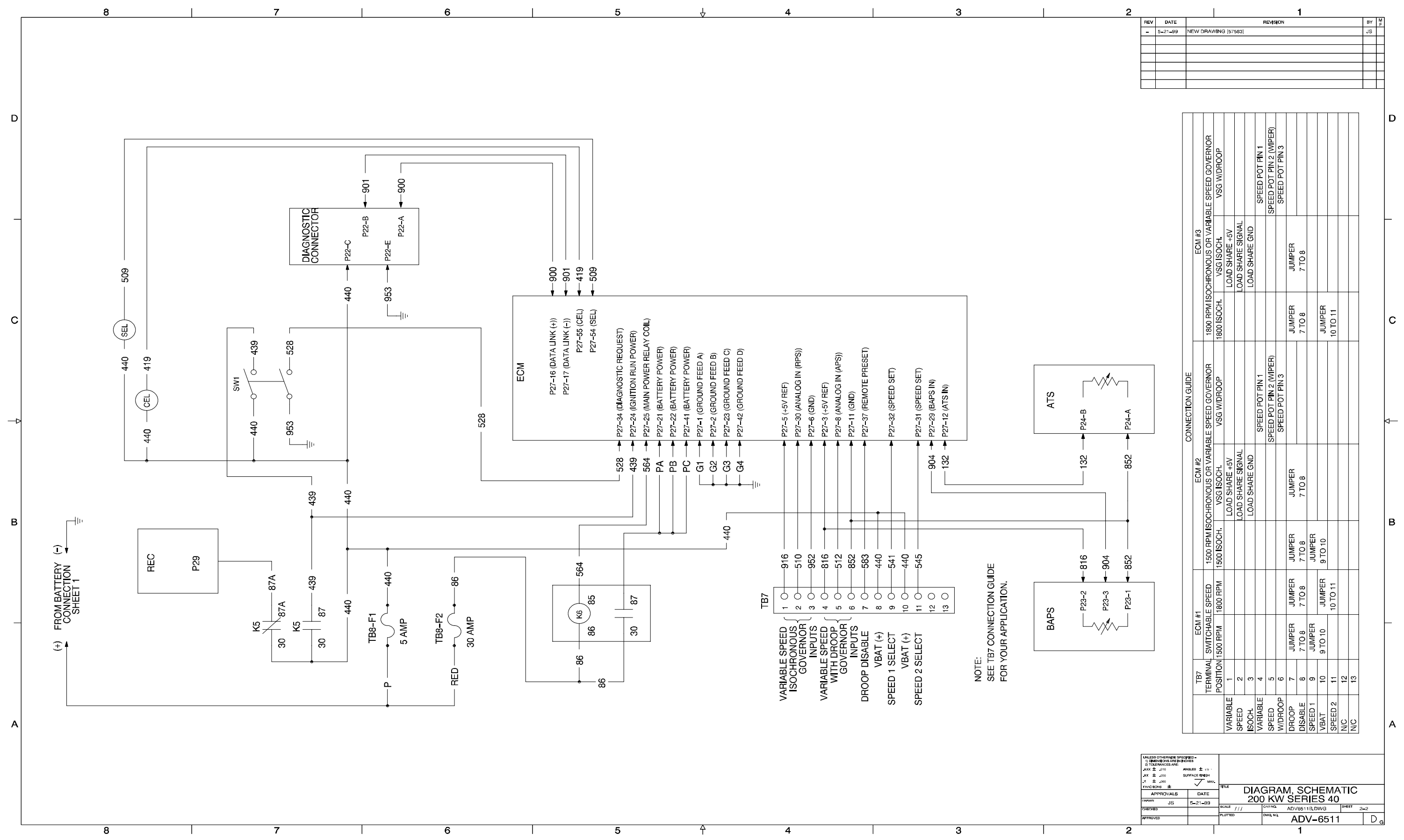
REV	DATE	REVISION	BY	CHK
1	5-21-99	NEW DRAWING (57583)	JS	

- LEGEND**
- AIRTS - AIR TEMPERATURE SENSOR
 - AVR - AUTOMATIC VOLTAGE REGULATOR
 - BAPS - BAROMETRIC AIR PRESSURE SENSOR
 - BCA - BATTERY CHARGING ALTERNATOR
 - BV - BATTERY VOLTMETER
 - CEL - CHECK ENGINE LIGHT
 - CT - CURRENT TRANSFORMER
 - CWCS - CITY WATER COOLING SOLENOID
 - ECM - ENGINE CONTROL MODULE
 - ESS - EMERGENCY STOP SWITCH
 - ESSW - ELECTRONIC SPEED SWITCH
 - F(#)- FUSE
 - HET - HIGH ENGINE TEMPERATURE SWITCH
 - HR - HOUR METER
 - K5 - ECM CONTROL RELAY
 - K6 - ECM POWER RELAY
 - K20 - CRANK RELAY
 - LWL - LOW OIL PRESSURE SWITCH
 - LWT - LOW WATER LEVEL SWITCH
 - MP - MAGNETIC PICKUP
 - OPG - OIL PRESSURE GAUGE
 - OPS - OIL PRESSURE SENDER
 - P(#)- PLUG
 - P-HET - PRELIMINARY HIGH ENGINE TEMPERATURE SWITCH
 - P-LOP - PRELIMINARY LOW OIL PRESSURE SWITCH
 - PMG - PERMANENT MAGNET GENERATOR
 - REC - RUN ENABLE CONNECTOR
 - SEL - STOP ENGINE LIGHT
 - SFG - SAFEGUARD BREAKER
 - SLB - STATIONARY LED BOARD
 - SM - STARTER MOTOR
 - SS - STARTER SOLENOID
 - SSEN - SPEED SENSOR
 - SW1 - TOGGLE SWITCH, 2 POSITION SPRING RETURN
 - TB1-TB4 - CONTROLLER BOARD TERMINAL BLOCK
 - TB5J - SAFEGUARD BREAKER TERMINAL BLOCK
 - TB7 - JUNCTION BOX TERMINAL BLOCK
 - VADJ - VOLTAGE ADJUST
 - WTS - WATER TEMPERATURE GAUGE
 - WTS - WATER TEMPERATURE SENDER

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES DIMENSIONS ARE IN MILLIMETERS		TITLE	
APPROVALS		DATE	
DRAWN	JS	SCALE	1/1
CHECKED		DATE	5-21-99
APPROVED		PLOTTED	
ADV-6511		D	

Engine Gauge Box for Paralleling Switchgear, Schematic Diagram, Sheet 1, ADV-6511A-

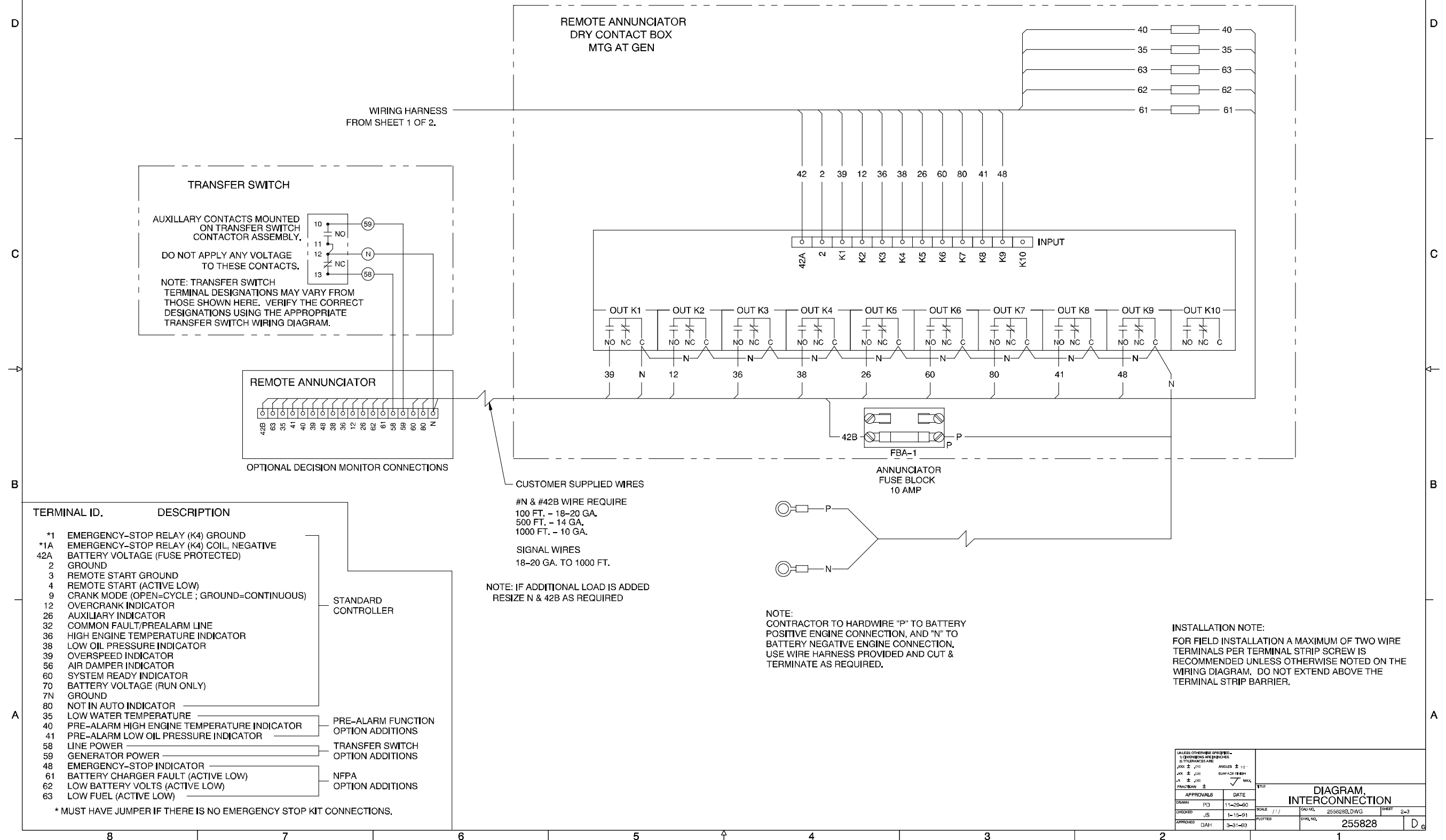
REV	DATE	REVISION	BY	CHK
-	5-21-99	NEW DRAWING (57583)	JS	



TB7		ECM #1			ECM #2			ECM #3		
TERMINAL POSITION	SWITCHABLE SPEED	1500 RPM	1800 RPM	1500 ISOCH.	1800 ISOCH.	VSG ISOCH.	1800 RPM ISOCHRONOUS OR VARIABLE SPEED GOVERNOR	1800 ISOCH.	VSG ISOCH.	VARIABLE SPEED GOVERNOR
1	VARIABLE SPEED	JUMPER	JUMPER	JUMPER	JUMPER		1800 RPM ISOCHRONOUS OR VARIABLE SPEED GOVERNOR			VSG W/DROOP
2	SPEED	7 TO 8	7 TO 8	JUMPER	JUMPER		1800 ISOCH.			VSG W/DROOP
3	ISOCH.	JUMPER	JUMPER	JUMPER	JUMPER		VSG ISOCH.			VARIABLE SPEED GOVERNOR
4	VARIABLE SPEED	9 TO 10	9 TO 10	JUMPER	JUMPER		LOAD SHARE +5V			VARIABLE SPEED GOVERNOR
5	SPEED	7 TO 8	7 TO 8	JUMPER	JUMPER		LOAD SHARE SIGNAL			VARIABLE SPEED GOVERNOR
6	W/DROOP	JUMPER	JUMPER	JUMPER	JUMPER		LOAD SHARE GND			VARIABLE SPEED GOVERNOR
7	DROOP	7 TO 8	7 TO 8	JUMPER	JUMPER		LOAD SHARE GND			VARIABLE SPEED GOVERNOR
8	DISABLE	7 TO 8	7 TO 8	JUMPER	JUMPER		SPEED POT PIN 1			VARIABLE SPEED GOVERNOR
9	SPEED 1	JUMPER	JUMPER	JUMPER	JUMPER		SPEED POT PIN 2 (WIPER)			VARIABLE SPEED GOVERNOR
10	VBAT	9 TO 10	9 TO 10	JUMPER	JUMPER		SPEED POT PIN 3			VARIABLE SPEED GOVERNOR
11	SPEED 2	10 TO 11	10 TO 11	JUMPER	JUMPER		SPEED POT PIN 1			VARIABLE SPEED GOVERNOR
12	N/C						SPEED POT PIN 2 (WIPER)			VARIABLE SPEED GOVERNOR
13	N/C						SPEED POT PIN 3			VARIABLE SPEED GOVERNOR

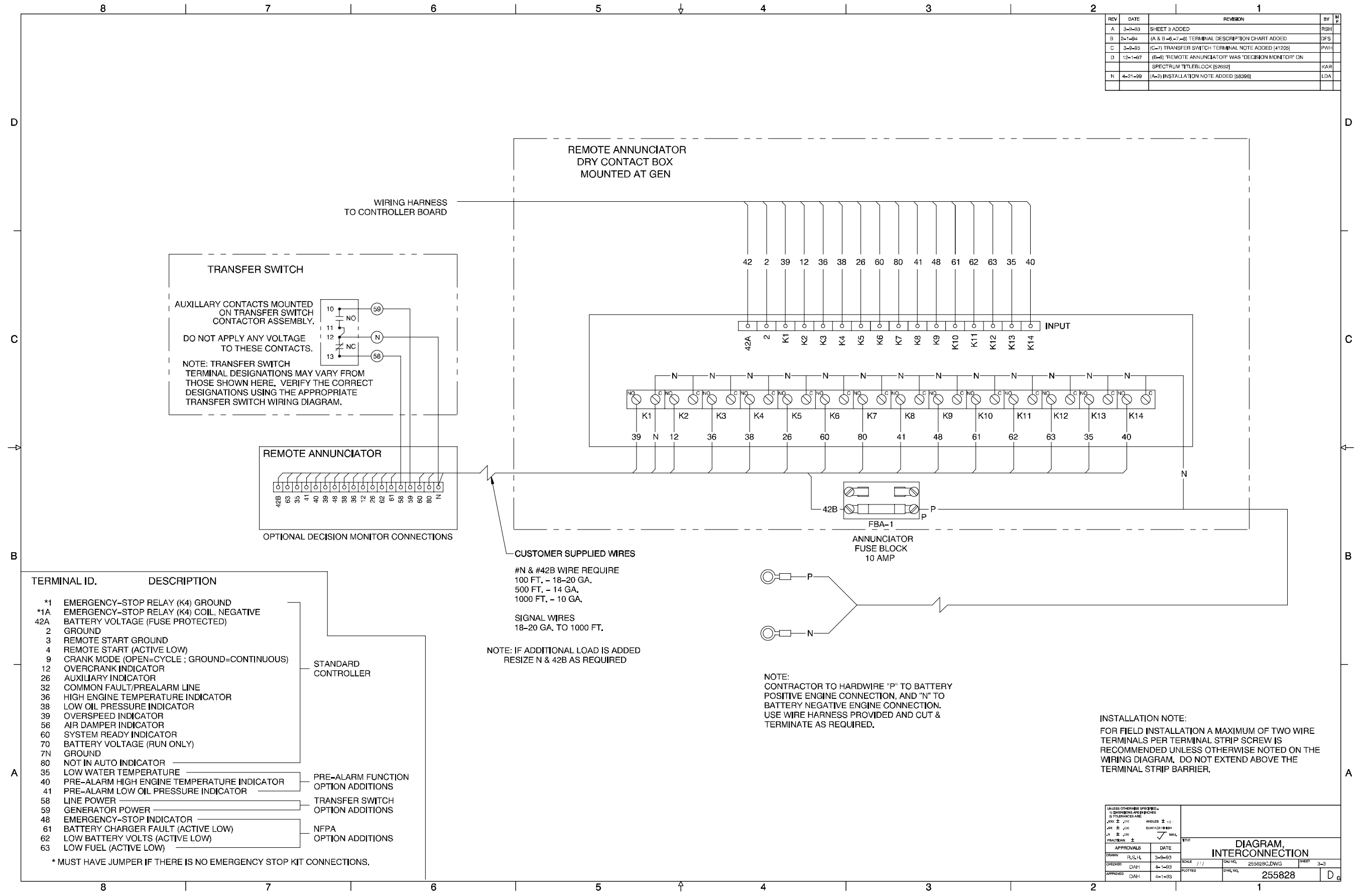
UNLESS OTHERWISE SPECIFIED - DIMENSIONS ARE IN INCHES		TITLE	
TOLERANCES ARE:		DIAGRAM, SCHEMATIC	
XXX ± .015	ANGLES ± 1°	200 KW SERIES 40	
XX ± .010	SURFACE FINISH	ADV-6511B	
X ± .005	MAX.	ADV-6511B.DWG	
FINISHES ±		SHEET 2-2	
APPROVALS	DATE	DWG. NO.	
DESIGNED JS	5-21-99	ADV-6511	
CHECKED		PLOTED	
APPROVED		D	

REV	DATE	REVISION	BY
J	3-9-93	SHEET 3 ADDED	RSH
K	3-1-94	(A & B - 6-7-8) TERMINAL DESCRIPTION CHART ADDED	DFS
L	3-9-95	(C-7) TRANSFER SWITCH TERMINAL NOTE ADDED (41205)	PWH
M	12-1-97	(B-7) 'REMOTE ANNUNCIATOR' WAS 'DECISION MONITOR' ON SPECTRUM TITLEBLOCK (52692)	KAR
N	4-21-99	(A-5) INSTALLATION NOTE ADDED (38398)	LDA

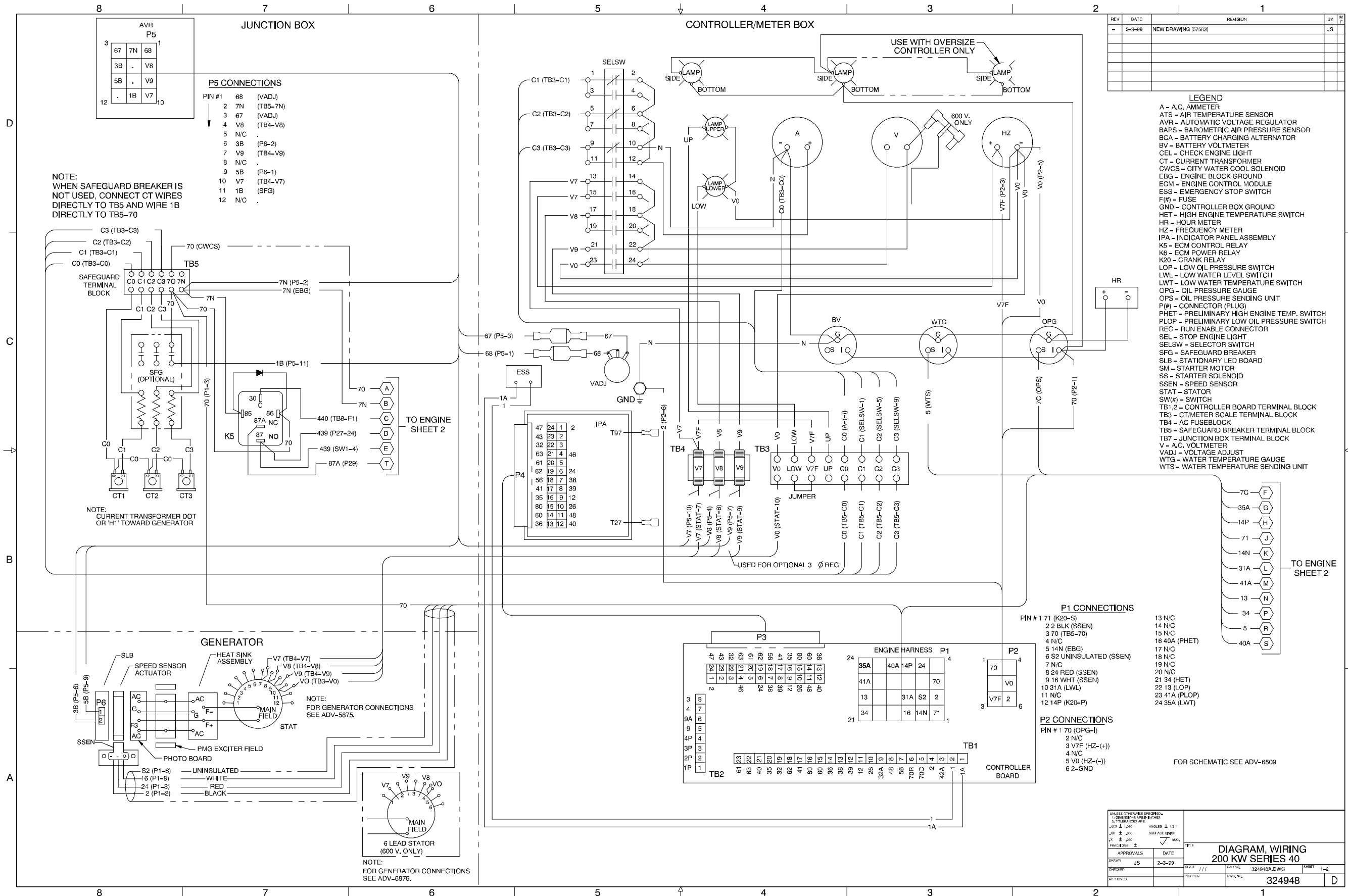


Microprocessor Controller, Accessory Connections, Remote Annunciator Kit, Sheet 1, 255828B-N

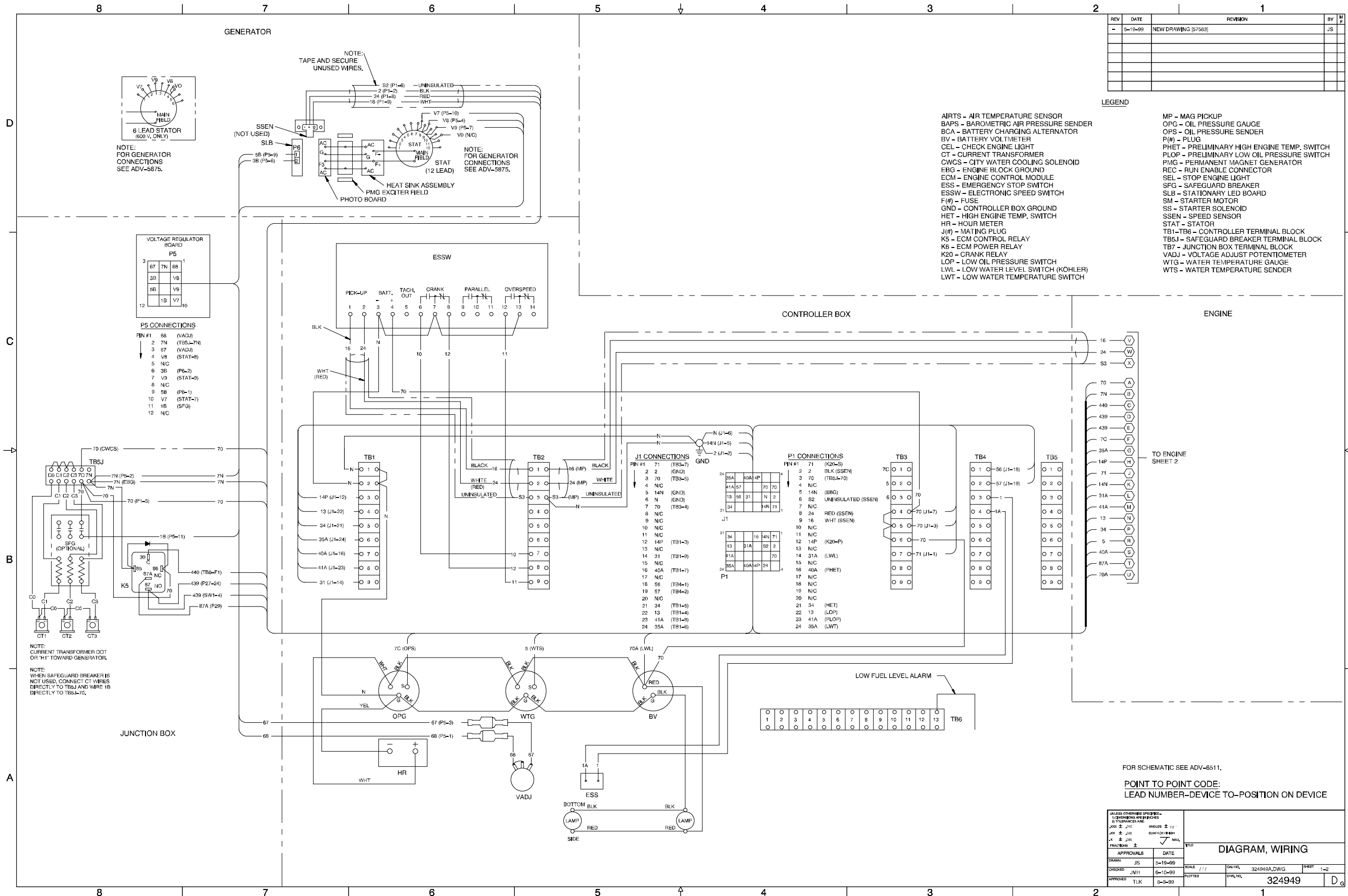
REV	DATE	REVISION	BY
A	3-9-93	SHEET 3 ADDED	RSJ
B	2-1-94	(A & B -6-7-8) TERMINAL DESCRIPTION CHART ADDED	DFS
C	3-9-95	(C-7) TRANSFER SWITCH TERMINAL NOTE ADDED (41205)	PWH
D	12-1-97	(B-6) 'REMOTE ANNUNCIATOR' WAS 'DECISION MONITOR' ON SPECTRUM TITLEBLOCK (52692)	KAR
N	4-21-99	(A-2) INSTALLATION NOTE ADDED (38398)	LDA



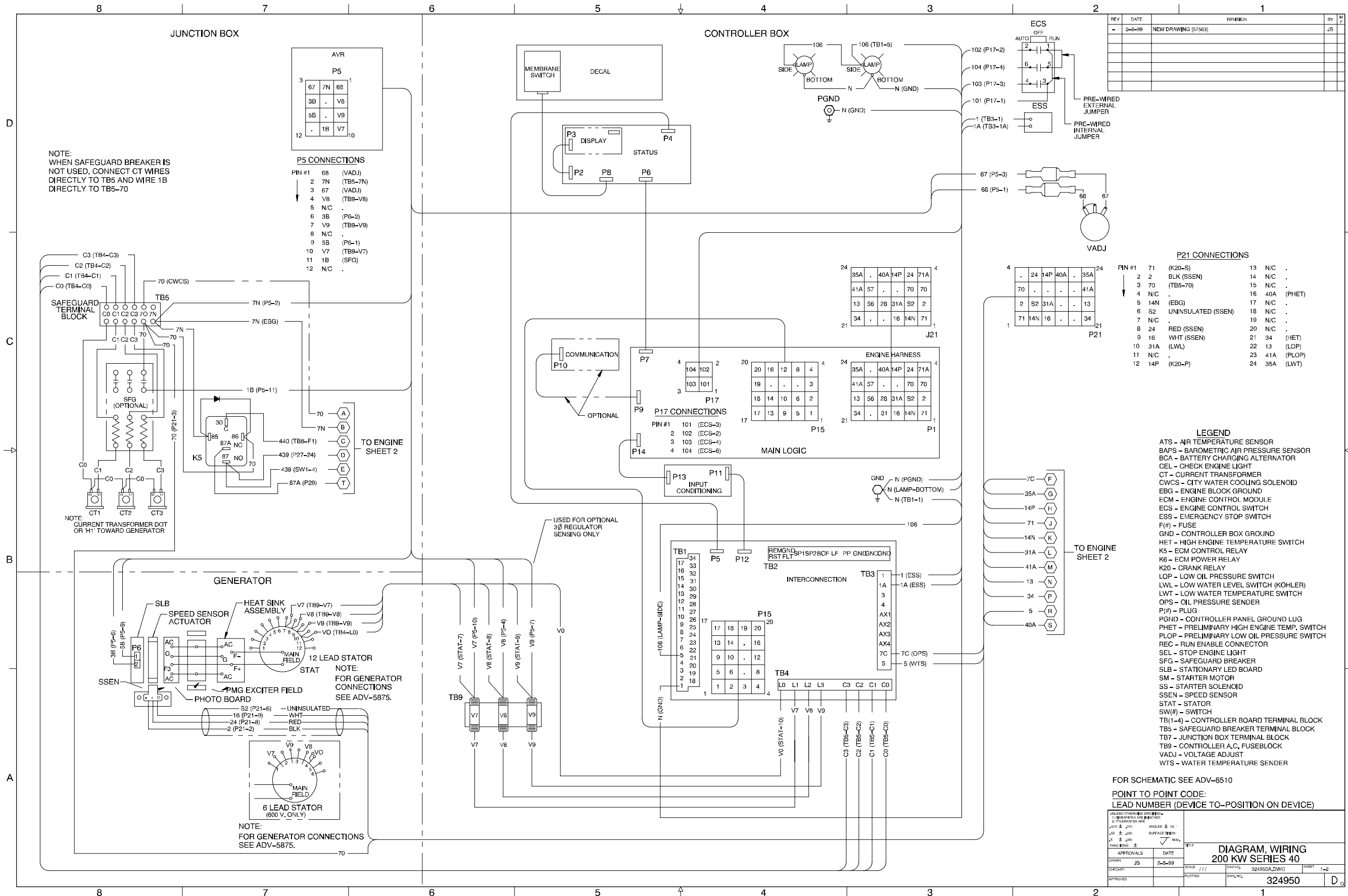
Microprocessor Controller, Accessory Connections, Remote Annunciator Kit, Sheet 2, 255828C-N



Microprocessor Controller, Point-to-Point Wiring Diagram, Sheet 1, 324948A-



Engine Gauge Box for Paralleling Switchgear, Point-to-Point Wiring Diagram, Sheet 1, 324949A-



NOTE:
WHEN SAFEGUARD BREAKER IS
NOT USED, CONNECT CT WIRES
DIRECTLY TO TB5 AND WIRE 1B
DIRECTLY TO TB5-70

NOTE:
CURRENT TRANSFORMER DOT
OR "H" TOWARD GENERATOR

P5 CONNECTIONS

PIN #1	68	(VADJ)
2	7N	(TB5-7N)
3	67	(VADJ)
4	V8	(TB9-V8)
5	N/C	.
6	3B	(P6-2)
7	V9	(TB9-V9)
8	N/C	.
9	5B	(P6-1)
10	V7	(TB9-V7)
11	1B	(SFG)
12	N/C	.

P21 CONNECTIONS

PIN #1	71	(K20-S)	13	N/C	.
2	2	BLK (SSEN)	14	N/C	.
3	70	(TB5-70)	15	N/C	.
4	N/C	.	16	40A	(PHET)
5	14N	(EBG)	17	N/C	.
6	S2	UNINSULATED (SSEN)	18	N/C	.
7	N/C	.	19	N/C	.
8	24	RED (SSEN)	20	N/C	.
9	16	WHT (SSEN)	21	34	(HET)
10	31A	(LWL)	22	13	(LOP)
11	N/C	.	23	41A	(PLOP)
12	14P	(K20-P)	24	35A	(LWT)

LEGEND

- ATS - AIR TEMPERATURE SENSOR
- BAPS - BAROMETRIC AIR PRESSURE SENSOR
- BCA - BATTERY CHARGING ALTERNATOR
- CEL - CHECK ENGINE LIGHT
- CT - CURRENT TRANSFORMER
- CWCS - CITY WATER COOLING SOLENOID
- EBG - ENGINE BLOCK GROUND
- ECM - ENGINE CONTROL MODULE
- ECS - ENGINE CONTROL SWITCH
- ESS - EMERGENCY STOP SWITCH
- F# - FUSE
- GND - CONTROLLER BOX GROUND
- HET - HIGH ENGINE TEMPERATURE SWITCH
- K5 - ECM CONTROL RELAY
- K6 - ECM POWER RELAY
- K20 - CRANK RELAY
- LOP - LOW OIL PRESSURE SWITCH
- LWL - LOW WATER LEVEL SWITCH (KOHLER)
- LWT - LOW WATER TEMPERATURE SWITCH
- OPS - OIL PRESSURE SENDER
- P# - PLUG
- PGND - CONTROLLER PANEL GROUND LUG
- PHET - PRELIMINARY HIGH ENGINE TEMP. SWITCH
- PLOP - PRELIMINARY LOW OIL PRESSURE SWITCH
- REC - RUN ENABLE CONNECTOR
- SEL - STOP ENGINE LIGHT
- SFG - SAFEGUARD BREAKER
- SLB - STATIONARY LED BOARD
- SM - STARTER MOTOR
- SS - STARTER SOLENOID
- SSEN - SPEED SENSOR
- STAT - STATOR
- SW# - SWITCH
- TB(1-4) - CONTROLLER BOARD TERMINAL BLOCK
- TB5 - SAFEGUARD BREAKER TERMINAL BLOCK
- TB7 - JUNCTION BOX TERMINAL BLOCK
- TB9 - CONTROLLER A,C, FUSEBLOCK
- VADJ - VOLTAGE ADJUST
- WTS - WATER TEMPERATURE SENDER

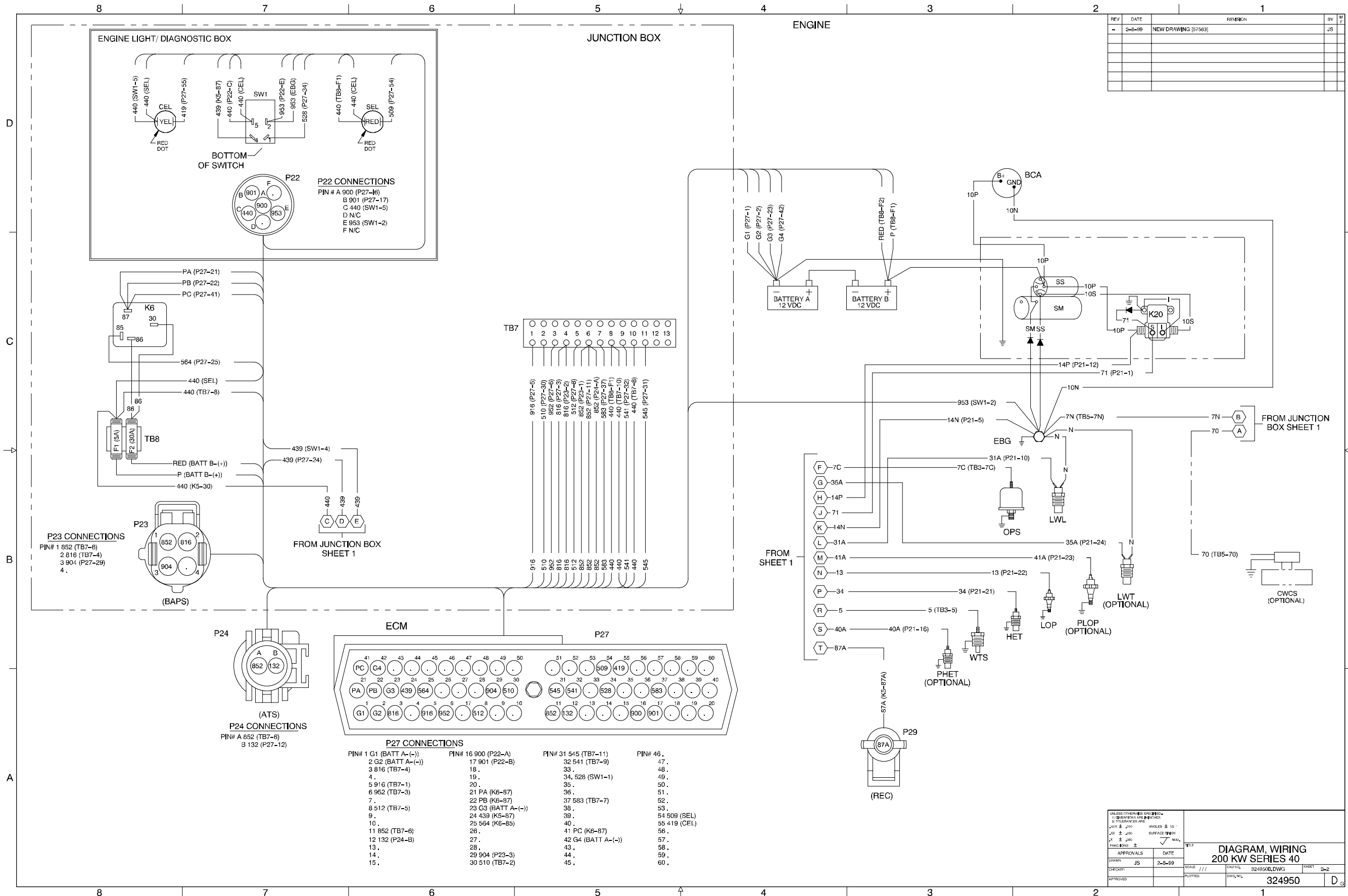
FOR SCHEMATIC SEE ADV-6510

POINT TO POINT CODE:
LEAD NUMBER (DEVICE TO-POSITION ON DEVICE)

UNLESS OTHERWISE SPECIFIED:	1. DIMENSIONS ARE IN INCHES
2. TOLERANCES ARE:	ANGLES ± 10°
3. SURFACE FINISH:	✓ MAX.
4. HATCHING:	✓ MAX.
5. APPROVALS:	DATE
DRAWN: JS	2-5-99
CHECKED:	DATE
APPROVED:	DATE

DIAGRAM, WIRING	
200 KW SERIES 40	
SCALE: 1/1	SHEET: 1-2
DATE: 2-5-99	DWG. NO.: 324950A.DWG
PLOTTED:	DWG. NO.: 324950

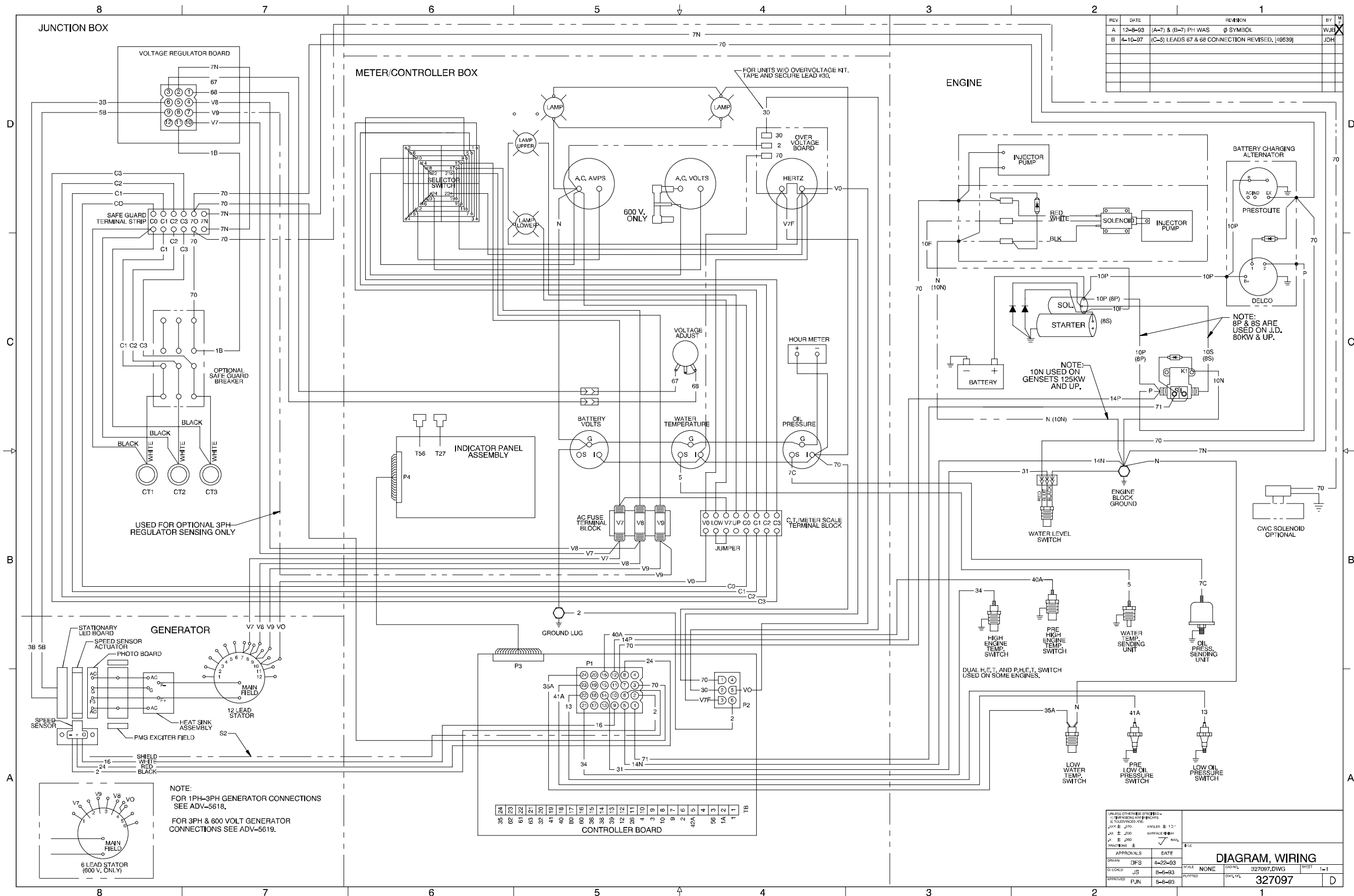
Digital Controller, Point-to-Point Wiring Diagram, Sheet 1, 324950A-



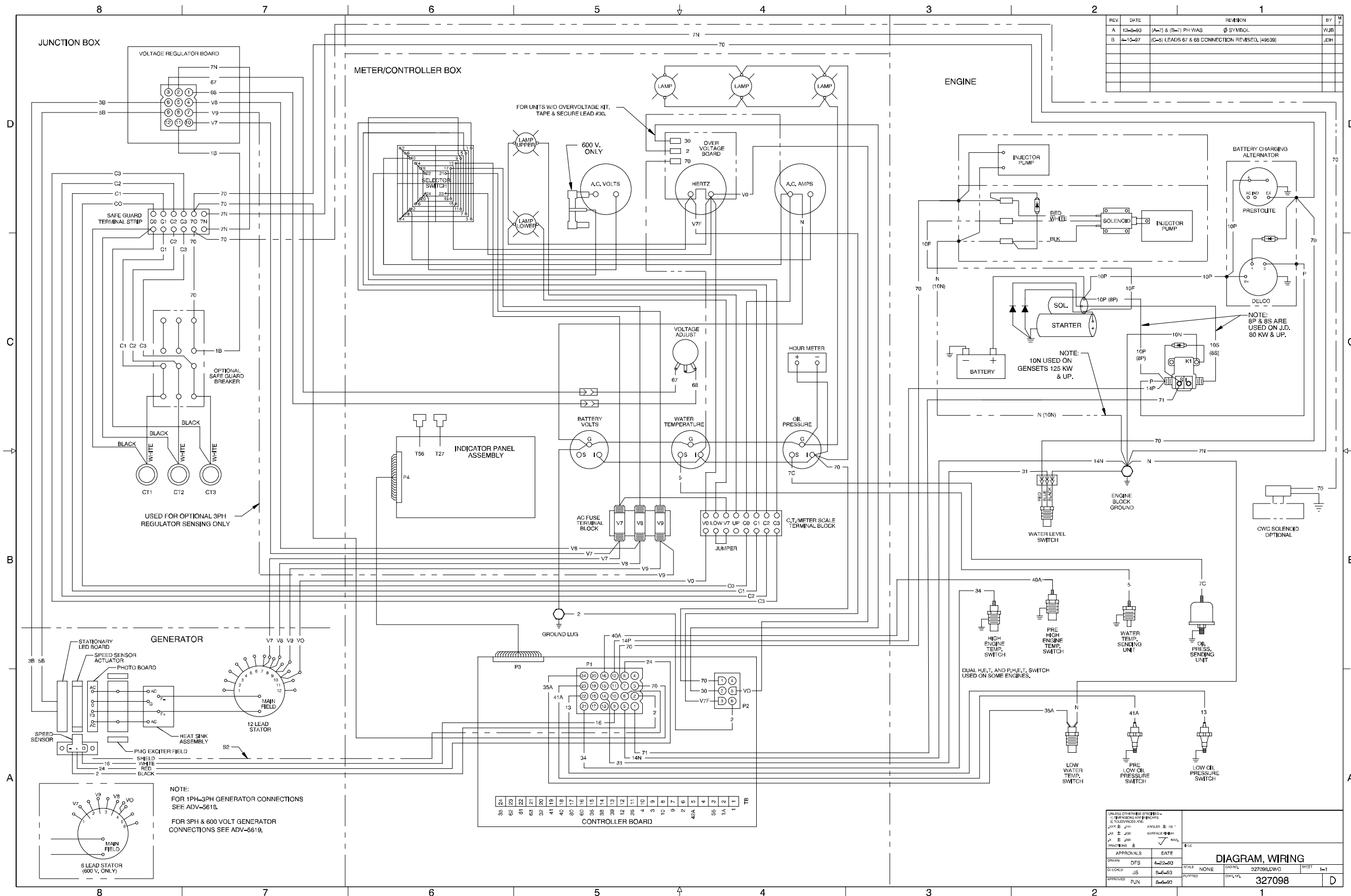
REV	DATE	REVISION	BY	APP
-	2-8-99	NEW DRAWING (57563)	JS	

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± 10° X.X ± .000 SURFACE FINISH X.X ± .000 MAX. HARDNESS ±		SCALE: 1/1		DRAWING NO.: 324950		SHEET: 2-2	
APPROVALS	DATE	DRAWN BY: JS		DATE: 2-8-99		PLOTTER: D	
DIAGRAM, WIRING 200 KW SERIES 40				DWG. NO. 324950		D	

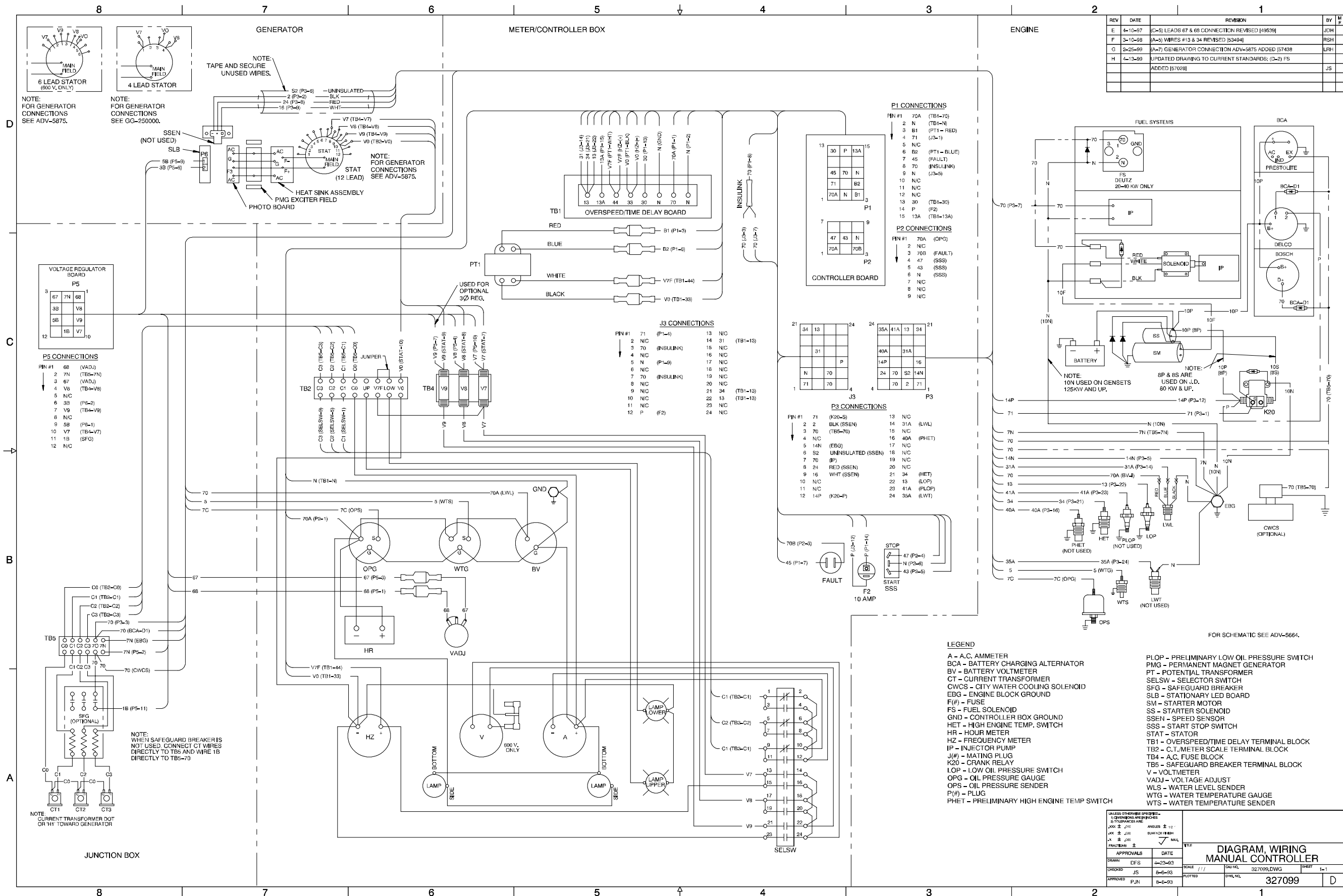
Digital Controller, Point-to-Point Wiring Diagram, Sheet 2, 324950B-



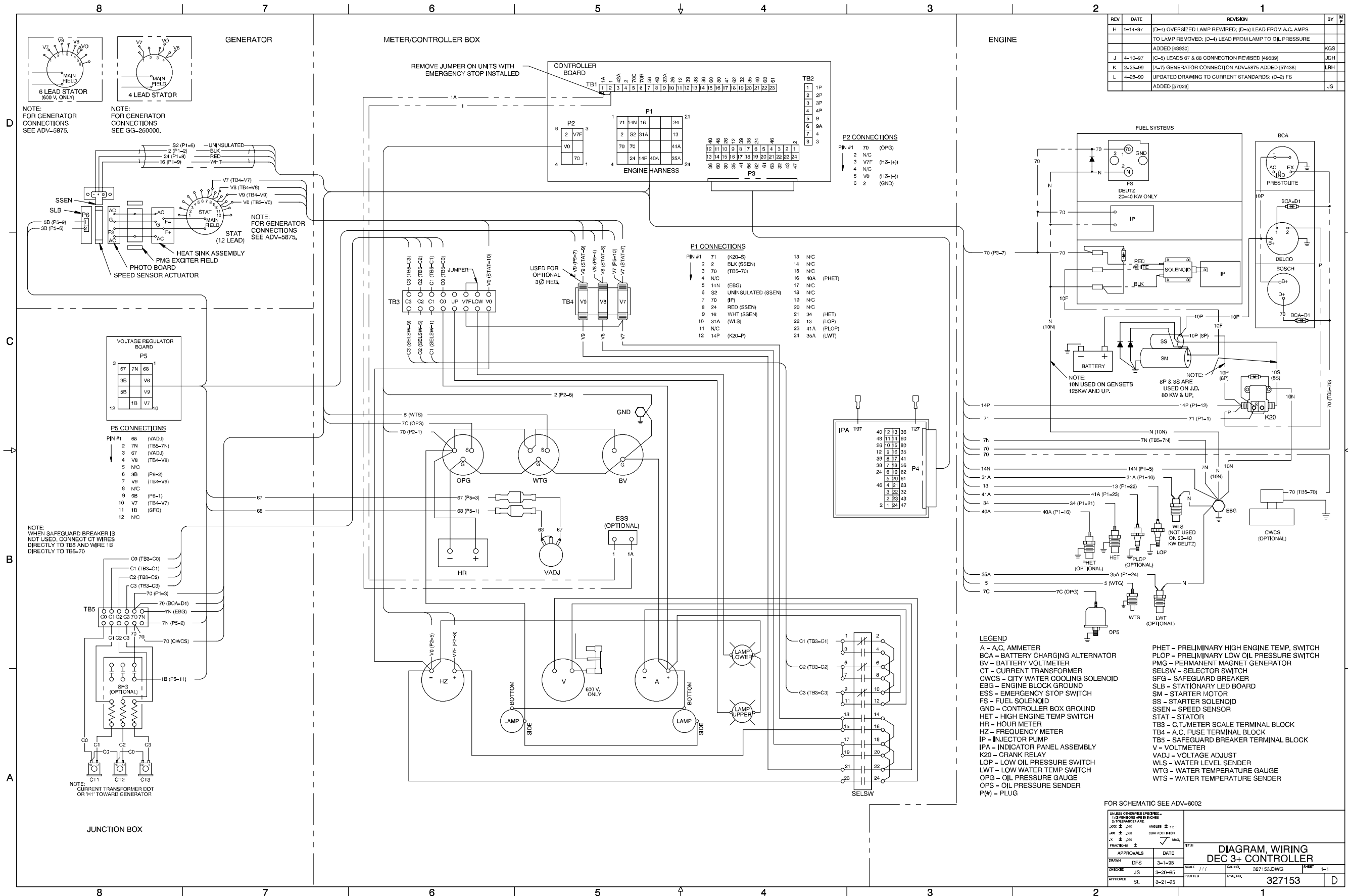
Microprocessor Controller, Point-to-Point Wiring Diagram, Sheet 1, 327097-B



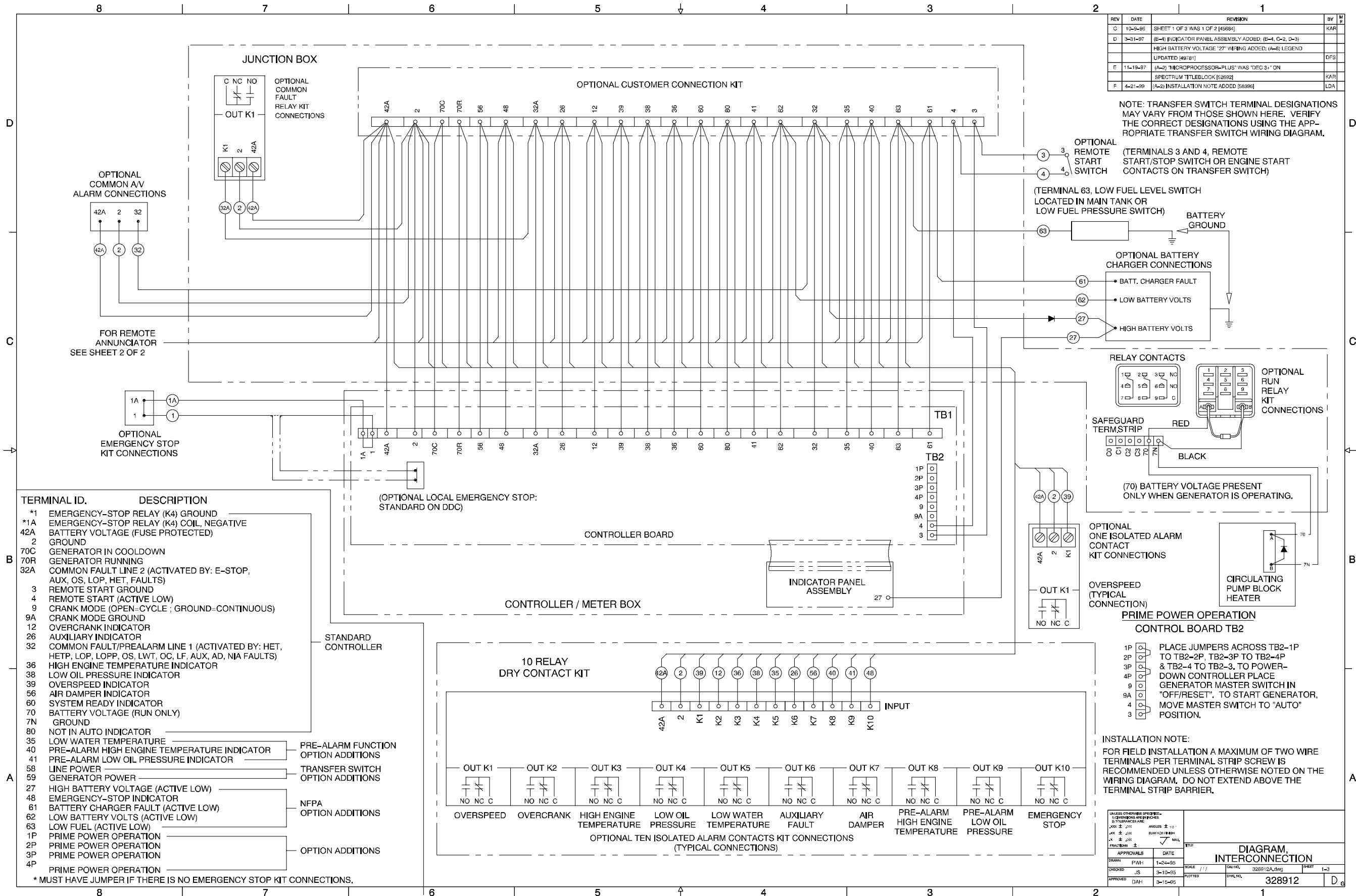
Microprocessor Controller, Point-to-Point Wiring Diagram, Sheet 2, 327098-B



Manual Controller, Point-to-Point Wiring Diagram, Sheet 1, 327099-H



Microprocessor Controller, Point-to-Point Wiring Diagram, Sheet 1, 327153-L



REV	DATE	REVISION	BY	CHK
C	10-3-96	SHEET 1 OF 3 WAS 1 OF 2 (45684)	KAR	
D	3-31-97	(B-1) INDICATOR PANEL ASSEMBLY ADDED; (B-4, C-2, D-3) HIGH BATTERY VOLTAGE '27' WIRING ADDED; (A-6) LEGEND UPDATED (4/9/97)	DFS	
E	11-13-97	(A-2) MICROPROCESSOR-PLUS WAS 'DEC 31' ON SPECTRUM TITLEBLOCK (52692)	KAR	
F	4-21-99	(A-2) INSTALLATION NOTE ADDED (58396)	LDA	

NOTE: TRANSFER SWITCH TERMINAL DESIGNATIONS MAY VARY FROM THOSE SHOWN HERE. VERIFY THE CORRECT DESIGNATIONS USING THE APPROPRIATE TRANSFER SWITCH WIRING DIAGRAM.

OPTIONAL REMOTE START SWITCH (TERMINALS 3 AND 4, REMOTE START/STOP SWITCH OR ENGINE START CONTACTS ON TRANSFER SWITCH)

(TERMINAL 63, LOW FUEL LEVEL SWITCH LOCATED IN MAIN TANK OR LOW FUEL PRESSURE SWITCH)

OPTIONAL BATTERY CHARGER CONNECTIONS

- 61 BATT. CHARGER FAULT
- 62 LOW BATTERY VOLTS
- 27 HIGH BATTERY VOLTS

RELAY CONTACTS

OPTIONAL RUN RELAY KIT CONNECTIONS

SAFEGUARD TERM. STRIP

RED

BLACK

(70) BATTERY VOLTAGE PRESENT ONLY WHEN GENERATOR IS OPERATING.

OPTIONAL ONE ISOLATED ALARM CONTACT KIT CONNECTIONS

OVERSPEED (TYPICAL CONNECTION)

PRIME POWER OPERATION CONTROL BOARD TB2

1P PLACE JUMPERS ACROSS TB2-1P TO TB2-2P, TB2-3P TO TB2-4P & TB2-4 TO TB2-3, TO POWER-DOWN CONTROLLER PLACE GENERATOR MASTER SWITCH IN "OFF/RESET". TO START GENERATOR, MOVE MASTER SWITCH TO "AUTO" POSITION.

INSTALLATION NOTE:

FOR FIELD INSTALLATION A MAXIMUM OF TWO WIRE TERMINALS PER TERMINAL STRIP SCREW IS RECOMMENDED UNLESS OTHERWISE NOTED ON THE WIRING DIAGRAM. DO NOT EXTEND ABOVE THE TERMINAL STRIP BARRIER.

UNLESS OTHERWISE SPECIFIED:
 1. DIMENSIONS ARE IN INCHES
 2. DIMENSIONS ARE IN MILLIMETERS
 3. DIMENSIONS ARE IN MILLIMETERS
 4. DIMENSIONS ARE IN MILLIMETERS
 5. DIMENSIONS ARE IN MILLIMETERS
 6. DIMENSIONS ARE IN MILLIMETERS
 7. DIMENSIONS ARE IN MILLIMETERS
 8. DIMENSIONS ARE IN MILLIMETERS
 9. DIMENSIONS ARE IN MILLIMETERS
 10. DIMENSIONS ARE IN MILLIMETERS

APPROVALS

DATE

SCALE

DATE

DATE

DATE

DIAGRAM, INTERCONNECTION

328912

TERMINAL ID.	DESCRIPTION
*1	EMERGENCY-STOP RELAY (K4) GROUND
*1A	EMERGENCY-STOP RELAY (K4) COIL, NEGATIVE
42A	BATTERY VOLTAGE (FUSE PROTECTED)
2	GROUND
70C	GENERATOR IN COOLDOWN
70R	GENERATOR RUNNING
32A	COMMON FAULT LINE 2 (ACTIVATED BY: E-STOP, AUX, OS, LOP, HET, FAULTS)
3	REMOTE START GROUND
4	REMOTE START (ACTIVE LOW)
9	CRANK MODE (OPEN-CYCLE ; GROUND-CONTINUOUS)
9A	CRANK MODE GROUND
12	OVERCRANK INDICATOR
26	AUXILIARY INDICATOR
32	COMMON FAULT/PREALARM LINE 1 (ACTIVATED BY: HET, HETP, LOP, LOPP, OS, LWT, OC, LF, AUX, AD, N/A FAULTS)
36	HIGH ENGINE TEMPERATURE INDICATOR
38	LOW OIL PRESSURE INDICATOR
39	OVERSPEED INDICATOR
56	AIR DAMPER INDICATOR
60	SYSTEM READY INDICATOR
70	BATTERY VOLTAGE (RUN ONLY)
7N	GROUND
80	NOT IN AUTO INDICATOR
35	LOW WATER TEMPERATURE
40	PRE-ALARM HIGH ENGINE TEMPERATURE INDICATOR
41	PRE-ALARM LOW OIL PRESSURE INDICATOR
58	LINE POWER
59	GENERATOR POWER
27	HIGH BATTERY VOLTAGE (ACTIVE LOW)
48	EMERGENCY-STOP INDICATOR
61	BATTERY CHARGER FAULT (ACTIVE LOW)
62	LOW BATTERY VOLTS (ACTIVE LOW)
63	LOW FUEL (ACTIVE LOW)
1P	PRIME POWER OPERATION
2P	PRIME POWER OPERATION
3P	PRIME POWER OPERATION
4P	PRIME POWER OPERATION

PRE-ALARM FUNCTION OPTION ADDITIONS

TRANSFER SWITCH OPTION ADDITIONS

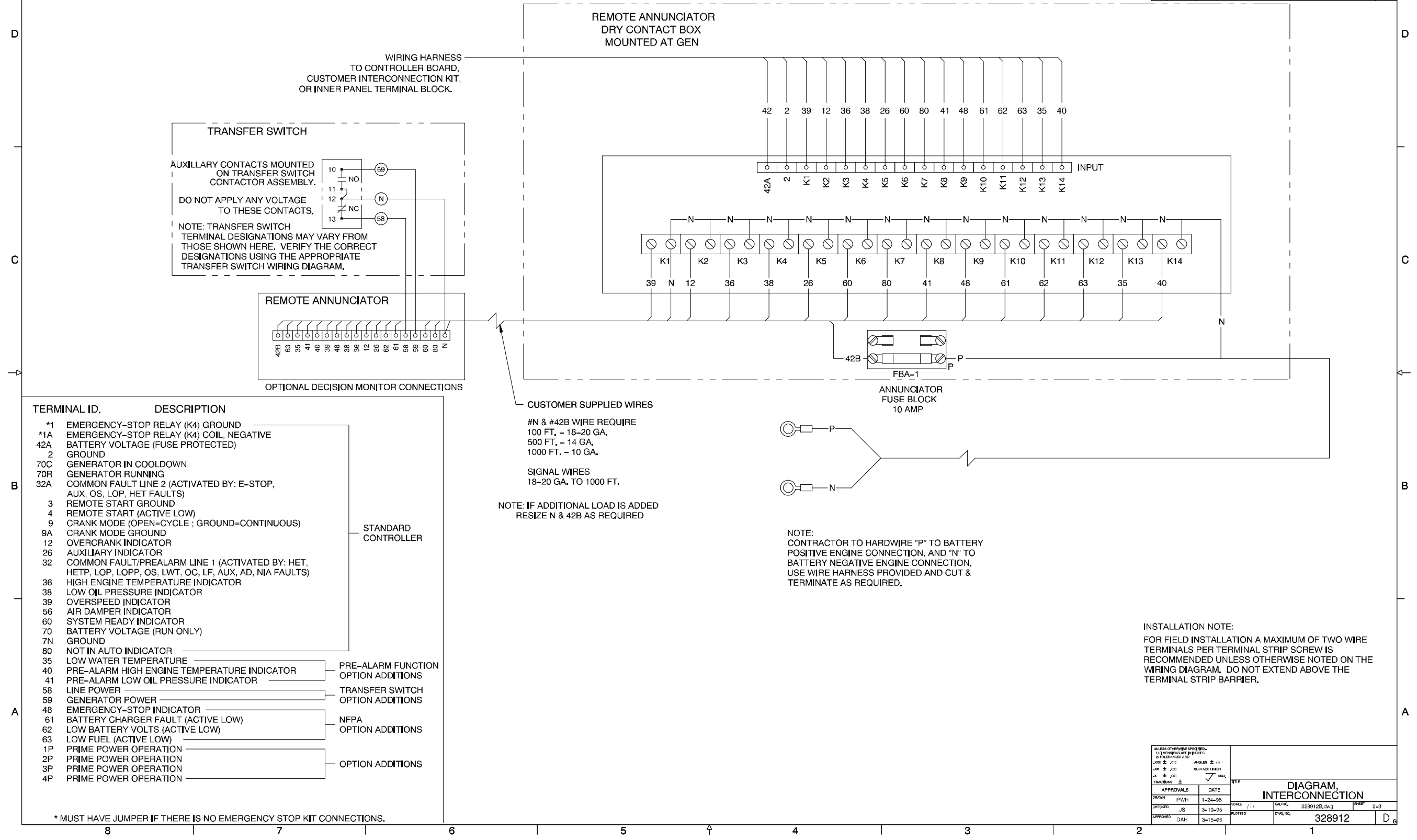
NFPA OPTION ADDITIONS

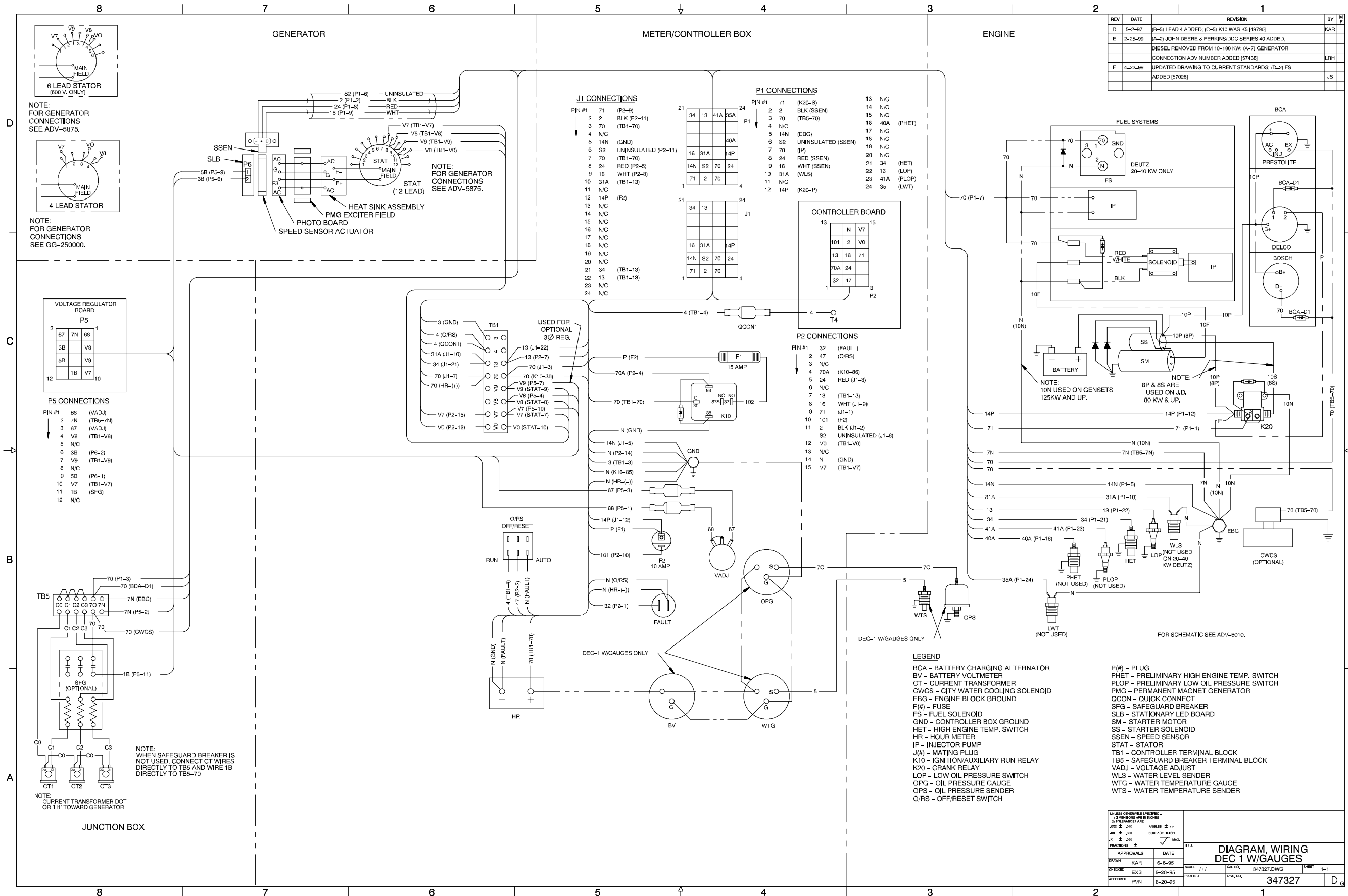
OPTION ADDITIONS

* MUST HAVE JUMPER IF THERE IS NO EMERGENCY STOP KIT CONNECTIONS.

Microprocessor Controller, Accessory Connections, Accessories, 328912A-F

REV	DATE	REVISION	BY	CHK
C	11-19-97	(A-2) MICROPROCESSOR-PLUS WAS DEC 3+1 & (B-7)		
		"REMOTE ANNUNCIATOR" WAS "DECISION MONITOR" ON		
		SPECTRUM TITLEBLOCK (5692)	KAR	
D	9-3-98	(A-2) 20-2000 KW WAS 20-1600 KW; (D-8) CUSTOMER		
		INTERCONNECTION KIT, OR INNER PANEL TERMINAL BLOCK, ADDED (56975)	LDS	
F	4-21-99	(A-2) INSTALLATION NOTE ADDED (56396)	LDA	





REV	DATE	REVISION	BY
D	5-2-97	(E-5) LEAD 4 ADDED; (C-5) K10 WAS K5 (49790)	KAR
E	2-25-99	(A-2) JOHN DEERE & PERKINS/IDC SERIES 40 ADDED.	
		DESEL REMOVED FROM 10-180 KW; (A-7) GENERATOR	
		CONNECTION ADV NUMBER ADDED (57438)	LRH
F	1-22-99	UPDATED DRAWING TO CURRENT STANDARDS; (C-2) FS	JS
		ADDED (57028)	

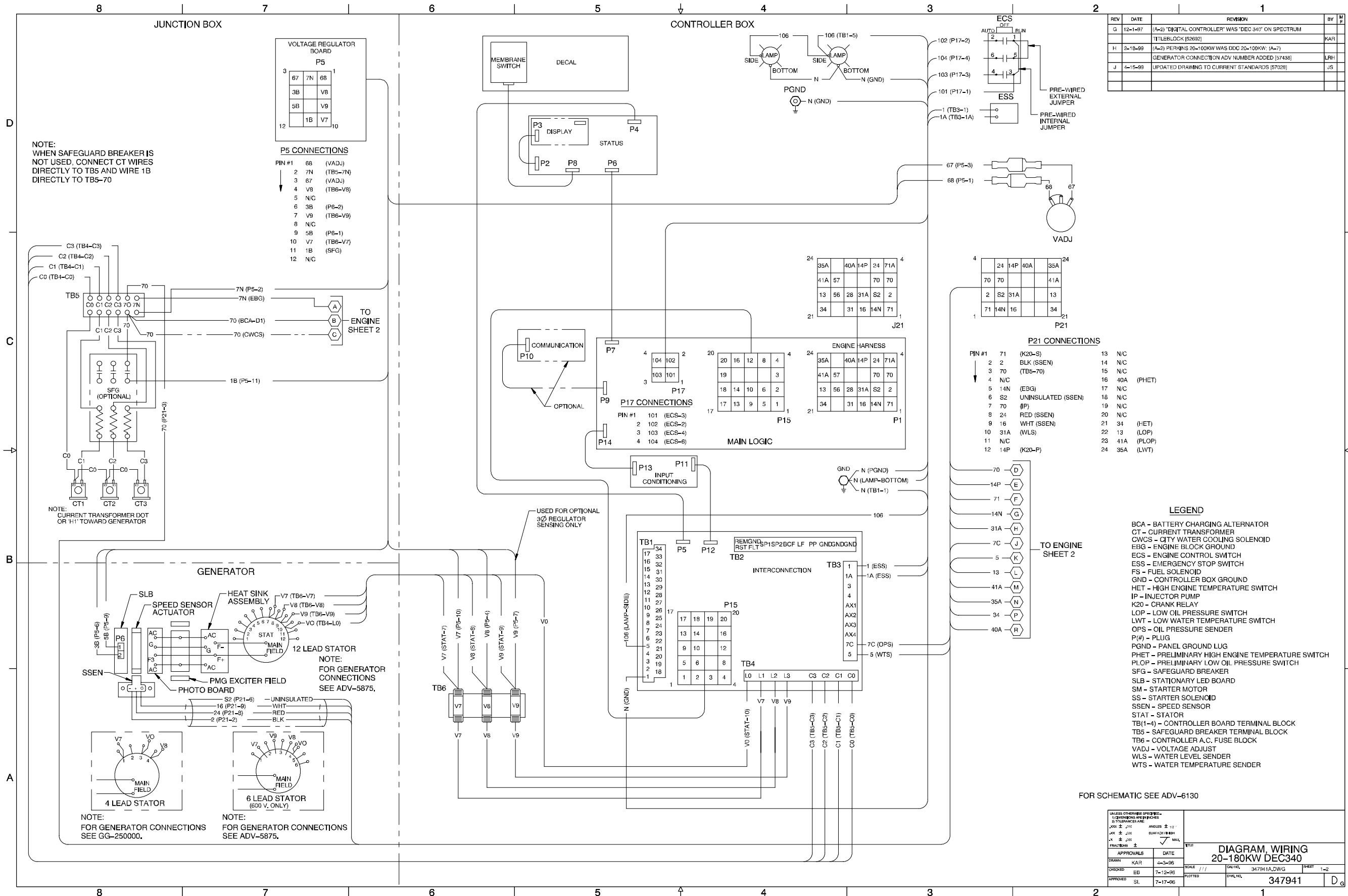
LEGEND

BCA - BATTERY CHARGING ALTERNATOR
 BV - BATTERY VOLTMETER
 CT - CURRENT TRANSFORMER
 CWCS - CITY WATER COOLING SOLENOID
 EBG - ENGINE BLOCK GROUND
 F# - FUSE
 FS - FUEL SOLENOID
 GND - CONTROLLER BOX GROUND
 HET - HIGH ENGINE TEMP. SWITCH
 HR - HOUR METER
 IP - INJECTOR PUMP
 J# - MATING PLUG
 K10 - IGNITION/AUXILIARY RUN RELAY
 K20 - CRANK RELAY
 LOP - LOW OIL PRESSURE SWITCH
 OPG - OIL PRESSURE GAUGE
 OPS - OIL PRESSURE SENDER
 O/RS - OFF/RESET SWITCH

P# - PLUG
 PHET - PRELIMINARY HIGH ENGINE TEMP. SWITCH
 PLOP - PRELIMINARY LOW OIL PRESSURE SWITCH
 PMG - PERMANENT MAGNET GENERATOR
 QCON - QUICK CONNECT
 SFG - SAFEGUARD BREAKER
 SLB - STATIONARY LED BOARD
 SM - STARTER MOTOR
 SS - STARTER SOLENOID
 SSEN - SPEED SENSOR
 STAT - STATOR
 TB1 - CONTROLLER TERMINAL BLOCK
 TB5 - SAFEGUARD BREAKER TERMINAL BLOCK
 VADJ - VOLTAGE ADJUST
 WLS - WATER LEVEL SENDER
 WTG - WATER TEMPERATURE GAUGE
 WTS - WATER TEMPERATURE SENDER

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES		ANGLES ± 1°	
SURFACES ARE UNLESS OTHERWISE SPECIFIED		SURFACE FINISH	
FRONT VIEW		MAX	
APPROVALS	DATE	SCALE	SHEET
DRAWN KAR	0-9-95	1/1	347327.DWG
CHECKED EXB	0-20-95	PLOTTED	1-1
APPROVED PVN	0-20-95	DWG. NO.	347327

Decision-Maker 1, Point-to-Point Wiring Diagram, Standard, 347327-F



REV	DATE	REVISION	BY	APP
G	12-1-97	(A-2) "DIGITAL CONTROLLER" WAS "DEC 340" ON SPECTRUM		
		TITLEBLOCK [50892]	KAR	
H	2-18-99	(A-2) PER QNS 20-100KW WAS DDIC 20-100KW (A-7)		
		GENERATOR CONNECTION ADV NUMBER ADDED [57436]	LRH	
J	4-15-99	UPDATED DRAWING TO CURRENT STANDARDS [57028]		
			JS	

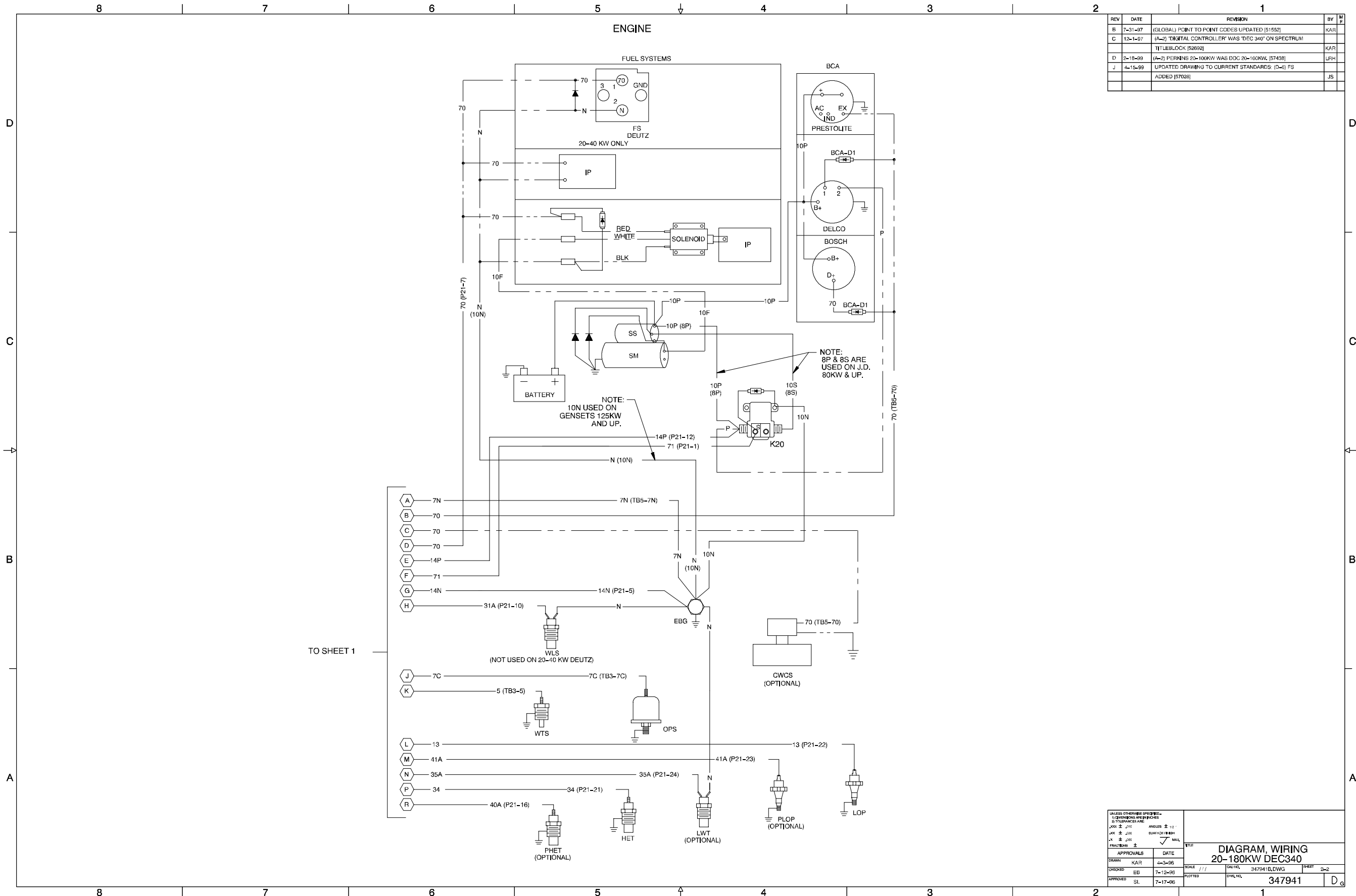
LEGEND

- BCA - BATTERY CHARGING ALTERNATOR
- CT - CURRENT TRANSFORMER
- CWCS - CITY WATER COOLING SOLENOID
- EBG - ENGINE BLOCK GROUND
- ECS - ENGINE CONTROL SWITCH
- ESS - EMERGENCY STOP SWITCH
- FS - FUEL SOLENOID
- GND - CONTROLLER BOX GROUND
- HET - HIGH ENGINE TEMPERATURE SWITCH
- IP - INJECTOR PUMP
- K20 - CRANK RELAY
- LOP - LOW OIL PRESSURE SWITCH
- LWT - LOW WATER TEMPERATURE SWITCH
- OPS - OIL PRESSURE SENDER
- P(#)- PLUG
- PGND - PANEL GROUND LUG
- PHET - PRELIMINARY HIGH ENGINE TEMPERATURE SWITCH
- PLOP - PRELIMINARY LOW OIL PRESSURE SWITCH
- SFG - SAFEGUARD BREAKER
- SLB - STATIONARY LED BOARD
- SM - STARTER MOTOR
- SS - STARTER SOLENOID
- SSEN - SPEED SENSOR
- STAT - STATOR
- TB(1-4) - CONTROLLER BOARD TERMINAL BLOCK
- TB5 - SAFEGUARD BREAKER TERMINAL BLOCK
- TB6 - CONTROLLER A.C. FUSE BLOCK
- VADJ - VOLTAGE ADJUST
- WLS - WATER LEVEL SENDER
- WTS - WATER TEMPERATURE SENDER

FOR SCHEMATIC SEE ADV-6130

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE: DIMENSIONS ARE: DIMENSIONS ARE: DIMENSIONS ARE:		SCALE: 1/1		DATE: 3/7/94		DRAWN: KAR		CHECKED: EB		APPROVED: SL	
TITRE		SCALE: 1/1		DATE: 3/7/94		DRAWN: KAR		CHECKED: EB		APPROVED: SL	
DIAGRAM, WIRING		SCALE: 1/1		DATE: 3/7/94		DRAWN: KAR		CHECKED: EB		APPROVED: SL	
20-180KW DEC340		SCALE: 1/1		DATE: 3/7/94		DRAWN: KAR		CHECKED: EB		APPROVED: SL	
347941		SCALE: 1/1		DATE: 3/7/94		DRAWN: KAR		CHECKED: EB		APPROVED: SL	

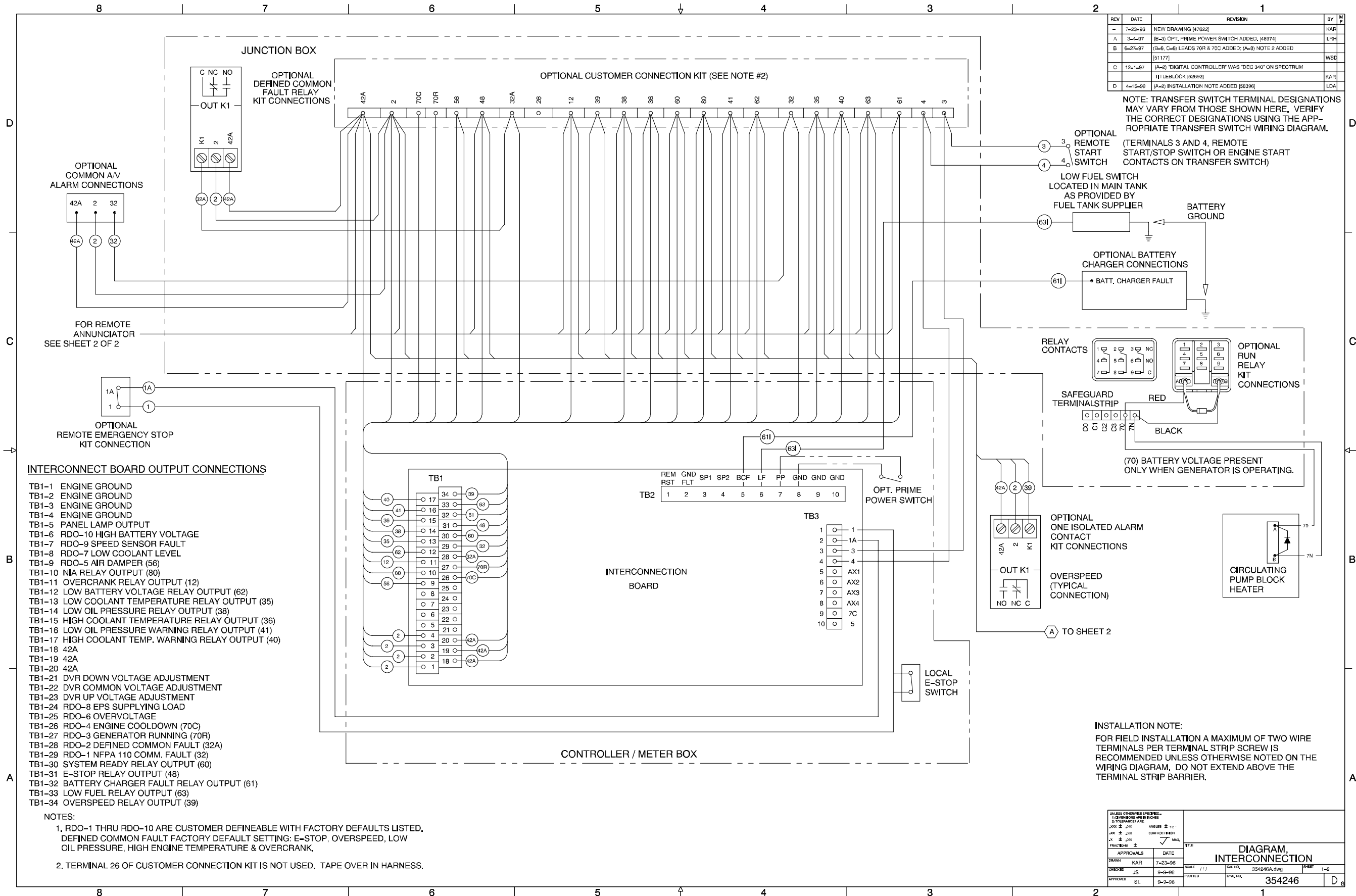
Digital Controller, Point-to-Point Wiring Diagram, Sheet 1, 347941A-J



REV	DATE	REVISION	BY	APP
B	7-31-97	(GLOBAL) POINT TO POINT CODES UPDATED [51552]	KAR	
C	12-1-97	(A-2) DIGITAL CONTROLLER WAS 'DEC 340' ON SPECTRUM	KAR	
		TITLEBLOCK [52692]	KAR	
D	2-18-99	(A-2) PERMITS 20-100KW WAS DDC 20-100KW [57439]	LRH	
J	4-15-99	UPDATED DRAWING TO CURRENT STANDARDS: (D-6) FS		
		ADDED [57028]	JS	

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE: DIMENSIONS ARE: DIMENSIONS ARE: DIMENSIONS ARE:		SCALE: 1/1		DATE: 347941B.DWG		SHEET: 2-2	
APPROVALS:	DATE:	DRAWN: KAR 2-3-99		CHECKED: EB 7-12-99		APPROVED: SL 7-17-99	
TITLE: DIAGRAM, WIRING				PART NO: 347941			
SUBTITLE: 20-180KW DEC340				DWG NO: 347941			

Digital Controller, Point-to-Point Wiring Diagram, Sheet 2, 347941B-J



REV	DATE	REVISION	BY	MR
-	7-23-98	NEW DRAWING (47622)	KAR	
A	3-4-97	(B-3) OPT. PRIME POWER SWITCH ADDED, (48974)	LRH	
B	6-27-97	(B-5, C-6) LEADS 70R & 70C ADDED; (A-8) NOTE 2 ADDED		
C	12-1-97	(A-2) DIGITAL CONTROLLER WAS 'DEC 340' ON SPECTRUM		WSC
		(51177)		
D	4-15-99	TITLEBLOCK (52692)	KAR	
		(A-2) INSTALLATION NOTE ADDED (58396)	LDA	

NOTE: TRANSFER SWITCH TERMINAL DESIGNATIONS MAY VARY FROM THOSE SHOWN HERE. VERIFY THE CORRECT DESIGNATIONS USING THE APPROPRIATE TRANSFER SWITCH WIRING DIAGRAM.

(TERMINALS 3 AND 4, REMOTE START/STOP SWITCH OR ENGINE START CONTACTS ON TRANSFER SWITCH)

INTERCONNECT BOARD OUTPUT CONNECTIONS

- TB1-1 ENGINE GROUND
- TB1-2 ENGINE GROUND
- TB1-3 ENGINE GROUND
- TB1-4 ENGINE GROUND
- TB1-5 PANEL LAMP OUTPUT
- TB1-6 RDO-10 HIGH BATTERY VOLTAGE
- TB1-7 RDO-9 SPEED SENSOR FAULT
- TB1-8 RDO-7 LOW COOLANT LEVEL
- TB1-9 RDO-5 AIR DAMPER (56)
- TB1-10 NIA RELAY OUTPUT (80)
- TB1-11 OVERCRANK RELAY OUTPUT (12)
- TB1-12 LOW BATTERY VOLTAGE RELAY OUTPUT (62)
- TB1-13 LOW COOLANT TEMPERATURE RELAY OUTPUT (35)
- TB1-14 LOW OIL PRESSURE RELAY OUTPUT (38)
- TB1-15 HIGH COOLANT TEMPERATURE RELAY OUTPUT (36)
- TB1-16 LOW OIL PRESSURE WARNING RELAY OUTPUT (41)
- TB1-17 HIGH COOLANT TEMP. WARNING RELAY OUTPUT (40)
- TB1-18 42A
- TB1-19 42A
- TB1-20 42A
- TB1-21 DVR DOWN VOLTAGE ADJUSTMENT
- TB1-22 DVR COMMON VOLTAGE ADJUSTMENT
- TB1-23 DVR UP VOLTAGE ADJUSTMENT
- TB1-24 RDO-8 EPS SUPPLYING LOAD
- TB1-25 RDO-6 OVERVOLTAGE
- TB1-26 RDO-4 ENGINE COOLDOWN (70C)
- TB1-27 RDO-3 GENERATOR RUNNING (70R)
- TB1-28 RDO-2 DEFINED COMMON FAULT (32A)
- TB1-29 RDO-1 NFPA 110 COMM. FAULT (32)
- TB1-30 SYSTEM READY RELAY OUTPUT (60)
- TB1-31 E-STOP RELAY OUTPUT (48)
- TB1-32 BATTERY CHARGER FAULT RELAY OUTPUT (61)
- TB1-33 LOW FUEL RELAY OUTPUT (63)
- TB1-34 OVERSPEED RELAY OUTPUT (39)

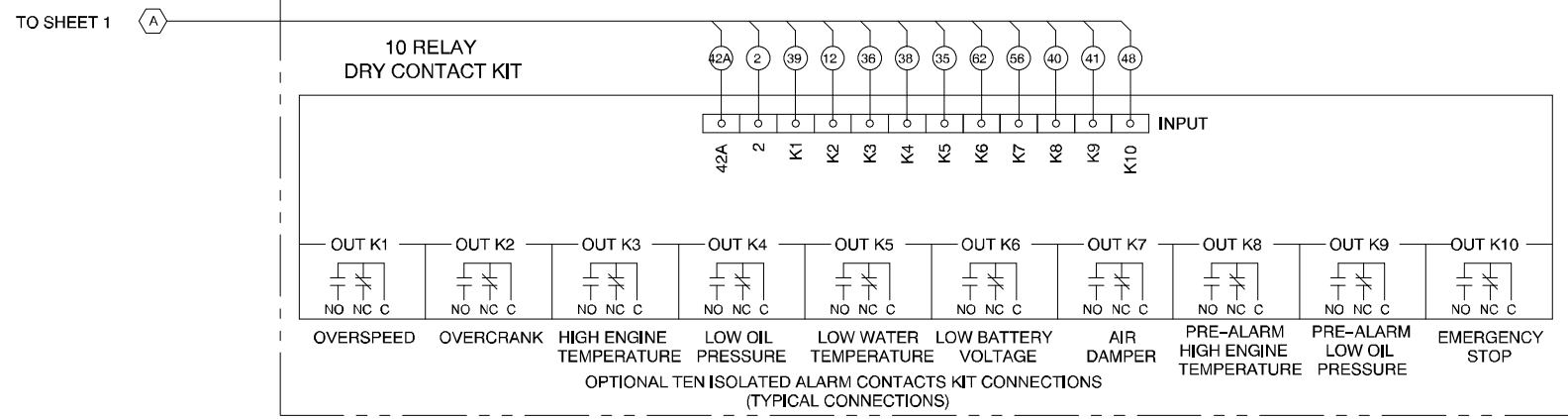
- NOTES:
- RDO-1 THRU RDO-10 ARE CUSTOMER DEFINEABLE WITH FACTORY DEFAULTS LISTED. DEFINED COMMON FAULT FACTORY DEFAULT SETTING: E-STOP, OVERSPEED, LOW OIL PRESSURE, HIGH ENGINE TEMPERATURE & OVERCRANK.
 - TERMINAL 26 OF CUSTOMER CONNECTION KIT IS NOT USED. TAPE OVER IN HARNESS.

INSTALLATION NOTE:
FOR FIELD INSTALLATION A MAXIMUM OF TWO WIRE TERMINALS PER TERMINAL STRIP SCREW IS RECOMMENDED UNLESS OTHERWISE NOTED ON THE WIRING DIAGRAM. DO NOT EXTEND ABOVE THE TERMINAL STRIP BARRIER.

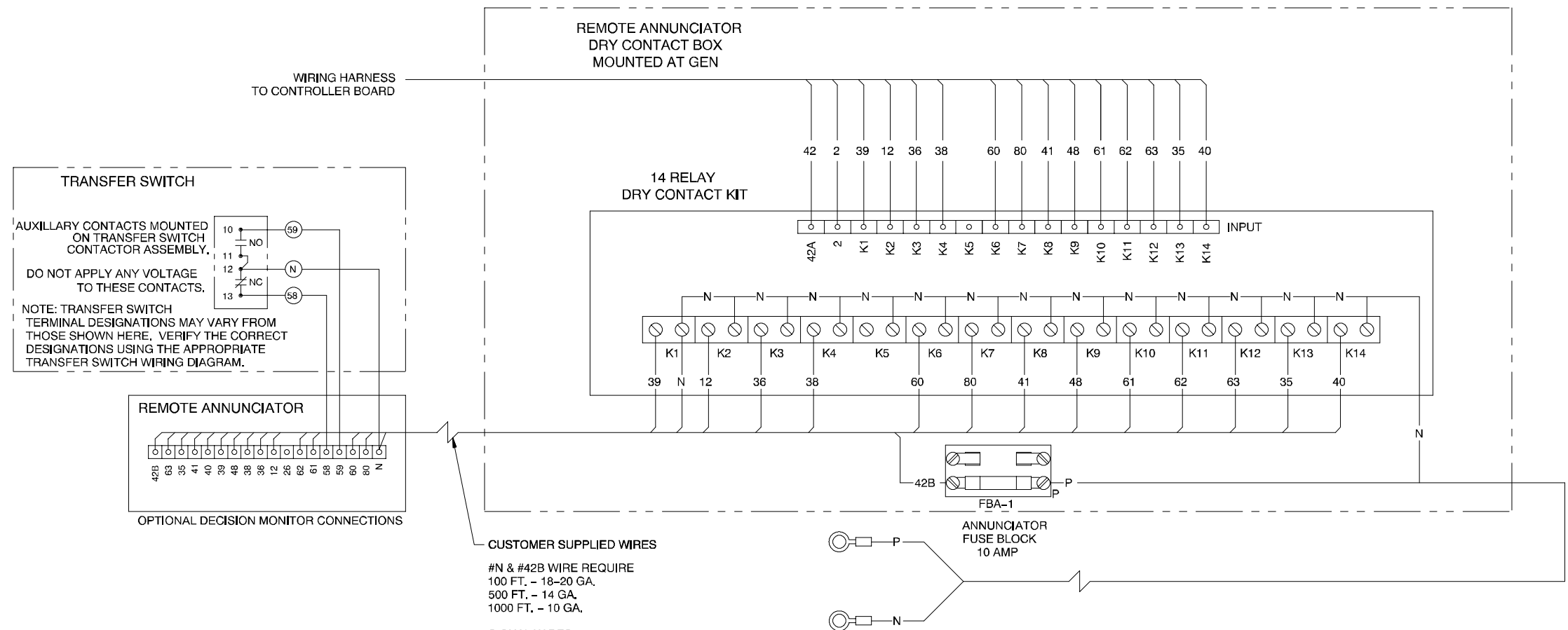
UNLESS OTHERWISE SPECIFIED: 1. DIMENSIONS ARE IN INCHES 2. DIMENSIONS ARE IN MILLIMETERS		TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ±	
APPROVALS		DATE	SCALE
DRAWN: KAR	7-23-98	SCALE: 1/1	DWG. NO.: 354246A.DWG
CHECKED: JS	8-9-98	PLOTTED:	SHEET: 1-2
APPROVED: SL	8-9-98	DWG. NO.: 354246	DWG. NO.: 354246

Digital Controller, Accessory Connections, Accessories, 343246A-D

REV	DATE	REVISION	BY	APP
-	7-23-96	NEW DRAWING [47822]	KAR	
A	12-1-97	(A-2) 'DIGITAL CONTROLLER' WAS 'DEC 340' ON SPECTRUM	KAR	
		'TITLEBLOCK [52692]	KAR	
D	4-15-99	(C-2) INSTALLATION NOTE ADDED [58399]	LDA	



INSTALLATION NOTE:
 FOR FIELD INSTALLATION A MAXIMUM OF TWO WIRE TERMINALS PER TERMINAL STRIP SCREW IS RECOMMENDED UNLESS OTHERWISE NOTED ON THE WIRING DIAGRAM. DO NOT EXTEND ABOVE THE TERMINAL STRIP BARRIER.



APPROVALS		DATE	SCALE	TITLE
DRAWN	KAR	7-23-96	1/1	DIAGRAM, INTERCONNECTION
CHECKED	JS	8-9-96		
APPROVED	SL	8-3-96		

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES AND DECIMALS THEREOF. ANGLES ± 1°. SURFACE FINISH: MAX. PRACTICAL.

DRAWING NO. 354246B.dwg SHEET 2-2

354246

Digital Controller, Accessory Connections, Remote Annunciator Kit, 354246B-D

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TP-5717 9/99b

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